



Voice

CSTA News

The Voice of K-12 Computer Science Education and its Educators

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Inside This Issue

FEATURES

- Exciting CSTA News! CSTA Annual Conference Update*
- Thank You CSTA 2015 Conference Committee*
- Thriving in Our Digital World*
- Exploring Collaboration*
- Survey Drawing Winners Announced*
- Congratulations*

COLUMNS

- Recruitment Tools*
- What's Happening in Connecticut?*
- AP CSP Big Ideas*
- What's Happening in Maryland?*
- Job Seekers and Employers*

INFO BRIEFS

- Keep Up with CSTA! Staff*
- Contribute to the Voice*
- Newly Elected Board Members*
- Meet the Authors*
- Mark Your Calendar*

IN THE NEXT
VOICE
BACK TO SCHOOL

Exciting CSTA News!

CSTA will lead into the future with the talents and dedication of two outstanding individuals – a true dynamic duo! Welcome, Dr. Mark Nelson, CSTA’s new Executive Director, and Lissa Clayborn, Deputy Executive Director/Chief Operating Officer.

Mark is an accomplished scholar and executive, with a collaborative leadership style.

CSTA has a mission that matters and together we can positively affect the lives of many teachers and students. ~ Mark Nelson

While at the National Association of College Stores, Mark and his team received national awards for innovation. Previously, he was recognized for his contributions at EDUCAUSE and as a faculty member at Rensselaer Polytechnic Institute. Mark’s first

college degree was in computer science. Mark will begin his duties on June 22.

Over the past year, Lissa has elevated CSTA to great heights through her dedication and expertise. She has worked tirelessly on several projects, including the Administrator’s Perspective and the assessment landscape studies. Lissa helped CSTA grow revenue by launching advertising opportunities and securing additional sponsors. She helped expand the Annual Conference and provide new benefits to the 21,000 plus members.

This is an exciting time for CSTA and CS education. I look forward to seeing the organization grow and develop additional presence in the community. ~ Lissa Clayborn

CSTA Annual Conference Update

2015 CSTA Annual Conference, Grapevine, Texas, July 12-14

It’s almost here! We hope to see you at the 2015 CSTA Annual Conference, July 12–14, in Grapevine, TX. Register for this extraordinary conference for computer science (CS) educators before June 26.

And you won’t want to miss this special conference event! The University of Texas at Dallas is hosting the CSTA Reception on Monday evening, July 13, 2015, from 5–8 at UT Dallas. The reception will include food service and a tour, hosted by the Department of Computer Science.

Please join the UT Dallas faculty and students for an enlightening evening of conversa-

tion and computing project demonstrations. Learn about the largest university-based K–12 CS outreach effort in the country and a unique mentoring model.

CSTA appreciates the generous support of our sponsors. We couldn’t do it without you!

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Thank You

CSTA 2015 Conference Committee

Thank you, **Duncan Buell**, for your many years serving as the Conference Review Chair. Your dedication, attention to detail, and deep understanding of the needs of computer science educators, has brought us many outstanding CSTA Annual Conference programs and workshops.

Committee members

Doug Peterson, Program Chair

Tammy Pirmann

Mindy Hart, Volunteer Coordinator

Henry Vo, Dallas/Fortworth Chapter Conference Liaison

Dave Reed, CSTA Professional Development Committee Chair

Lizan Ward, Greater Houston Chapter Conference Liaison

Hal Speed, Central Texas Chapter Conference Liaison

Lissa Clayborn, Deputy Executive Director/Chief Operating Officer, CSTA

Philip East, Workshop Chair

Sheena Vaidyanathan

Thriving in Our Digital World

Bradley Beth and Calvin Lin

Thriving in Our Digital World (TODW) is a dual-enrollment course based on the Computer Science Principles (CSP) framework. Now in its third year, TODW has been offered to over 500 students across Texas. These students represent a diverse population not typically seen in competing college preparatory CS courses. The table on the next page illustrates how TODW enrollments of underrepresented groups compare to those of Advanced Placement (AP) CS.

The demographics of the corresponding populations within the State of Texas are roughly 11.32% Black and 36.71% Hispanic.

To support this course, we are committed to training K–12 teachers in both CS content knowledge and skills, and in student-centered pedagogies that are designed to contextualize CS in daily life. Teachers are supported by

intensive professional development through a nine-day summer institute. During the school year, teachers are supported by two day-long professional development sessions, virtual office hours, and community-driven support. Our professional development targets existing CS teachers, as well as veteran teachers who have not previously taught CS courses.

The TODW curriculum leverages four innovations that combine to form a unique learning experience for students. Each of the innovations has been demonstrably effective in broadening participation in computing or in facilitating student success across demographics:

1. It aligns with the CSPI framework.

Students who complete our course will be prepared to complete the upcoming AP CSP assessment designed by College Board.

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CSTA Voice is a publication of the Computer Science Teachers Association.

CSTA Voice is a quarterly publication for members of the Computer Science Teachers Association. It provides analysis and commentary on issues relating to K–12 computer science education, resources for educators, and information for members. The publication supports CSTA's mission to promote the teaching of computer science and other computing disciplines.

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Criteria for submitting articles: Potential writers for CSTA should send a brief description of the proposed article, estimated word count, statement of value to members, author's name & brief bio/background info, and suggested title to the editor at cstapubs@csta.acm.org. The final length, due date and title will be negotiated for chosen articles.

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Enrollments of Underrepresented Groups

	<i>Thriving in Our Digital World</i>	AP Computer Science Courses	
		Texas	U.S.
Female	29%	23%	19%
Black	7%	3%	4%
Hispanic	31%	19%	8%

- It uses blended instruction in which classes are led by a high school teacher who is supported by online resources. Our course model leverages the blended learning approach through a combination of online lessons, activities, and instructional supports.
- It uses a project-based learning pedagogy (PBL) that makes students active participants in the learning process. PBL is implemented through a highly structured system of scaffolds aligned with the research-based curricular support materials produced by the Buck Institute for Education.
- It focuses on CS concepts and computational thinking skills in the context of current topics in applied CS, rather than through the explicit use of programming. Our course is designed around a number of modules in which students learn content and skills motivated by specific problems that students are asked to solve.

The course uses a combination of Scratch and Processing languages. Early content modules, such as Programming and Representation, use Scratch to reinforce basic programming constructs, such as conditionals, loops, and control flow, while minimizing frustration. Because Scratch is a visual block-based language, we can focus on program logic.

Later modules, such as Digital Manipulation and Big Data, exchange the ease of Scratch for the power of a text-based language, Processing. Built on the Java programming language, Processing focuses on graphics and visualization applications with a simplified syntax. Thus, Processing allows students to become familiar with Java syntax—often used in subsequent courses—while minimizing the need to learn the object-oriented programming principles usually taught in the AP CS A course.

Course content is modularized into units that

focus on a specific circumscribed project artifact. Each module situates its learning objectives within the context of acquiring the tools necessary to complete the module’s project. Along the way, student collaboration and creativity is focused through the lens of PBL. Students are given explicit support through strategies such as peer assessment, group contracts, milestone development, and collaborative programming.

Each of the content modules corresponds to 5–6 weeks of instruction:

- **Impact** – Students focus on ways in which the world has changed through the ubiquity of computing.
- **Programming** – Students create an application that showcases a personal interest.
- **Representation** – Students discover the power of bits and use them to design a game controller.
- **Digital Manipulation** – Students manipulate digital media to evaluate the ways that digitization and computing have changed photography, art, and music.
- **Big Data** – Students tell a story by investigating techniques used to mine and harness vast quantities of data.
- **Artificial Intelligence** – Students compare and contrast human and artificial intelligences through the use of the Turing Test.

As a dual enrollment course, TODW continues to grow throughout Texas. With the onset of the new AP CS Principles exam, we anticipate more rapid growth throughout the country as we create a new version of TODW that is geared towards the AP exam.

More information:

apcsprinciples.org
scratch.mit.edu
processing.org
www.cs.utexas.edu/~engage



Let us know if your contact information changes.
t.nash@csta-hq.org

Contribute to the CSTA Voice

The editorial board of the *CSTA Voice* is dedicated to ensuring that this publication reflects the interests, needs, and talents of the *CSTA* membership. Please consider sharing your expertise and love for computer science education by contributing newsletter content.

Potential writers for the *CSTA Voice* should send a brief description of the proposed article, estimated word count, statement of value to members, author’s name and brief bio/background info, and suggested title to the editor at: cstapubs@csta.acm.org. The final length, due date, and title will be negotiated for chosen articles. Please share your knowledge.

Volunteer today!

The CSTA Voice welcomes your comments.

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Letters to the Editor are limited to 200 words and may be edited for clarification.



ACM founded CSTA as part of its commitment to K–12 computer science education.

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Meet the rest of the CSTA
Board members

[csta.acm.org/About/
sub/Governance_Files/
BoardofDirectors.html](http://csta.acm.org/About/sub/Governance_Files/BoardofDirectors.html)

Exploring Collaboration

Now That's Innovative

Jerome Ward

Collaboration between a novice computer science (CS) teacher and a veteran English teacher has yielded instructional success at Hartselle High School (HHS) in Hartselle, AL.

In recent years, HHS has diligently worked to change its academic culture and embrace new methods of instruction, especially those that utilize technology. In 2010, the Hartselle City School District became part of a consortium of schools that partnered with the Alabama State Board of Education and A+ College Ready in an effort to improve access to, and student achievement in, Advanced Placement (AP) courses. As a result of our success toward meeting our goals, a NSF-sponsored award provided funding to begin an AP CS program.

HHS was fortunate to have a skilled engineer with a passion for teaching to accept the new teaching position. James "Bucky" Garner joined the staff in summer of 2014 and immediately attended AP training. We began a dialogue about the writing portion of the AP CSP Explore Performance Task (PT) and it culminated in a series of lessons designed to prepare students to research, analyze, synthesize, and write—all skills necessary to successfully complete the PT.

Initially, we met to discuss the requirements and learning outcomes of the PT to increase our own awareness of the skills students need for the PT, and to develop a plan of action for instructional design and delivery. The PT rubric served as a starting point. In the following weeks, I

designed a series of lessons with handouts and graphic organizers for use with his CS classes. (See the Concept Mapper, page 5.)

Scheduling conflicts prevented me from providing live instruction, so I used an app called Educreations to record and deliver lessons to the students. In all, I created seven lessons with the app, each addressing a skill associated with writing the PT. The graphic organizer and writing steps complemented the Educreations lessons and provided students with hands-on tools for completing the PT. The videos, used over the course of the semester, were well received by the students and their writing skills improved.

Though an unlikely pairing, our willingness to collaborate led to greater student learning. After having success with the lessons in his own classroom, Garner shared the materials with other CS teachers in Alabama, many of whom have reported similar successes using the lessons.

Collaboration with other content-area teachers is an effective way to increase awareness of CS. If collaboration between an English teacher and a CS teacher can yield such positive results, then what might happen if other instructors joined in the conversation? Certainly, there would be greater opportunities to collaborate and be innovative!

More information

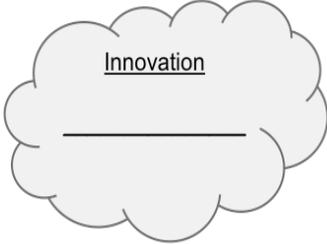
www.teachingchannel.org/videos/collaborative-teaching-ntn

Survey Drawing Winners Announced

In April, CSTA asked our community to share their concerns and ideas about high school computer science in the U.S. In an effort to provide research-based information for educators, decision-makers, and researchers, CSTA conducts regular, national surveys and disseminates the results to the community. As promised, we chose five lucky winners from the respondent pool. They each received a \$100 Amazon gift card. We would also like to send a big thank you to all of our members and industry friends who participated. We truly appreciate your time and insights.

Linda Blasko — Shoreham-Wading River High School; Shoreham, NY
Pamela Casner — Louis P. Slade Middle School; New Britain, CT
Mike Welty — Clearwater High School; Clearwater, KS
Andrew Williams — Lycée Français de Los Angeles; Los Angeles, CA
Tanya Wardally — Boys and Girls High School; Brooklyn, NY

Concept Mapper

<p>Information Sources:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>		<p>Negatives/Concerns:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>
<p>Intended Purposes:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>	<p>Technical Details:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>	<p>Impacts on Society:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>
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Meet the Authors

Bradley Beth

University of Texas, Austin
Bradley is the Program Coordinator for Project Engage and is a former HS CS teacher.

Marie desJardins

University of Maryland, Baltimore
Marie is a professor of CS and will become the Associate Dean for Academic Affairs in the College of Engineering and Information Technology this fall.

Joe Greenawalt

Educator, Maryland
Joe has been a teacher for over 35 years and is currently a CS teacher at North Point High School in Charles County.

Pauline Lake

Mobile CSP, Consultant
Pauline is the Secretary of the CSTA Connecticut. As a consultant, she visits classrooms to help with technical issues and instruction.

Calvin Lin

University of Texas, Austin
Calvin is a Professor of CS and Director of the Turing Scholars Honors Program.

Art Lopez

CS Educator, CA
Art teaches CSP and Applications at Sweetwater High School. He is a member of CSTA San Diego.

Dianne O’Grady-Cunniff

Charles County Schools, MD
Dianne is the Instructional Specialist for CS and a Code.org affiliate trainer.

James Veseskies

CS Educator, Hartford, CT
James is the treasurer of CSTA Connecticut. He teaches at Hartford Trinity College Academy and works with Mobile CSP.

Jerome Ward

Educator, Hartselle, AL
Jerome is the AP English teacher and Instructional Partner at Hartselle HS.

Congratulations

2015 CSTA Administrator Impact Award Betsy Hargrove, Superintendent, Avondale, Arizona

The 2014 CSTA Administrator Impact Award, given by CSTA and Code.org, recognizes an administrator who has made an outstanding contribution to improve the quality and availability of K–12 computer science education.

Honorable Mention

- Corey Alderdice, Director, Arkansas School for Mathematics, Sciences and Arts
- Ryan Gravette, Director of Technology, Idaho Digital Learning
- Kimberly Hill, Superintendent, Charles County Public Schools, MD
- Carl Lyman, IT Education Administrator, Utah Office of Education

Institutional Member Alert

Are you aware that you can post your K–12 CS professional development and K–12 CS student events on the CSTA website?

Don’t delay! Send the details today: customerservice@csta-hq.org

www.csta.acm.org/ProfessionalDevelopment/sub/TeacherWorkshops.html

www.csta.acm.org/Resources/sub/CSEventsforKids.html

What's Happening in Connecticut?

A Visit to the Education Committee

Pauline Lake and James Vesekis

CSTA members understand the value of a quality computer science (CS) curriculum. The question is how to convince others. The Connecticut CSTA chapter (CTCSTA) has been working to educate our legislators and pass legislation. It helps to know the process.

First, find a state representative who will sponsor a bill to require CS in the curriculum. When you find a supporting representative, consider forming an advisory committee to keep the ball rolling. After a bill is proposed, keep in contact with your representative about when public hearings for the bill will be heard in front of the state Education Committee.

Second, gather a group passionate about the issue. Develop a plan to present testimony before the Education Committee. On the day of public hearings, get to the legislature building early to add your name to the list of citizens wanting to testify. Be prepared to stay the entire day if there are several bills on the list. The CTCSTA members waited 11 hours before testifying. Your testimony should include your name, where you are from, the bill you are supporting, and reasons for your support. It also helps to address the Chairperson of the Education Committee by title and name.

The testimony statement should be brief; aim for less than three minutes. Even if your name does not make it on the list of speakers, typically the committee will ask if anyone else would like to testify before moving on to the next bill.

Those who are unable to attend the hearing can prepare and submit written testimonies electronically prior to the event. Check with your state legislature beforehand as the process may vary from state to state.

Members of the CTCSTA were present for the hearing of S.B. No. 962 concerning CS in the middle school curriculum. In our testimony, we emphasized that little or no cost is required by districts to implement the MS CS curriculum. There are grants and resources available to assist with teacher training. Several curricula have been developed and are available at no cost. If schools and legislators are made aware of these resources, we are one step closer to our goal. Be sure to cite specifics that relate to your state.

We also highlighted the equity issues and how CS educational opportunities can help close the achievement gap for women and other underrepresented groups. CS lessons can enable a variety of students to achieve academic success. Read some of the testimony at: bit.ly/jimstestimony.

Giving testimony before the Education Committee was beneficial and encouraging. The Committee was receptive and offered their network, including the State Department of Education, to help us notify teachers and schools about upcoming professional development opportunities.

The bill was passed and Public Act 15-94 will be implemented beginning in July 2016. Public CT middle schools will be required to include "computer programming" in their curriculum. See it here: www.cga.ct.gov/2015/act/pa/pdf/2015PA-00094-R00SB-00962-PA.pdf.

Start the process. Reach out to your state Education Committee and advocate for CS in the K–12 curriculum.

More information on S.B. No. 962:

www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&bill_num=SB00962&which_year=2015

Recruitment Tools

Recruiting Strategies for Your Growing CS Program

Art Lopez

For the past three years, I have worked to broaden participation and recruit students for the Advanced Placement Computer Science Principles (AP CSP) pilot and AP CS A courses at Sweetwater High School in California.

With the support provided by Beth Simon and Diane Baxter of CS-CAVE (Creating a Village of CS Educators), Jan Cuny of the NSF, and the College Board, I have recruited approximately 250 students for the CSP pilot course next year. For more information on CS-CAVE visit: www.ce21sandiego.org/cs_cave/index.php.

The school population includes: 89% on free/reduced lunch program, 80% English language learners, and 97% from groups underrepresented in CS. The majority of the students recruited for the pilot are young women and/or ethnically and culturally diverse. We will be teaching four sections of CSP and one or two of AP CS A during the 2015–2016 school year. This is amazing because only four years ago, in our entire district of 13 high schools and 11 middle schools, there was only one AP CS A course being taught. And that course had been taught only four times in the past 20 years.

Materials from CSTA, CS-CAVE, NSF, College Board, and Code.org, have been used in our recruitment efforts. Nearly 750 students, almost one-third of the school population, participated in the Hour of Code during CSEd Week. It was awesome; we even made the evening news on a local Spanish-language television station.

Successful strategies also included CSP presentations and a variety of communications to students and teachers:

- Presentation for Sweetwater HS, Granger Jr. HS, and National City MS: goo.gl/Qqtue6
- Presentation for other district schools: goo.gl/ZgYQUI
- Art Lopez video announcement: goo.gl/zt51Bt
- Code.org video: goo.gl/90uBC
- Letter offering presentations: goo.gl/Sxt1S0
- Beth Simon CSP presentation video: goo.gl/V0lulm
- CSP presentation for administrators: goo.gl/yOKfni

The support and commitment of our school and district administrators, including Sweetwater High School Principal Maribel Gavin, Curriculum Director Roman Del Rosario, and Curriculum Specialist Katrine Czajkowski, of the Sweetwater Union High School district, have been instrumental in our success. Without their support and commitment, the growth of the CS program would not have occurred.

I am currently training 55 district teachers during a series of seven workshops to teach CSP and a proposed middle school CS course. Our district's goal is to offer CSP at all of the district's 13 high schools and 11 middle schools, among other CS courses. The Sweetwater Union High School District is making strides in addressing equity issues and bridging the digital divide by providing opportunities in CS.

AP CSP Update

Let's do the Numbers

Rebecca Dovi

The Advanced Placement Computer Science Principles (AP CSP) course is built around seven Big Ideas that are expanded through Enduring Understandings, Learning Objectives, and Essential Knowledge statements. The “Data and Information” Big Idea is one of the more challenging parts of the new course. It is not a topic that most high school CS teachers typically teach and there are not many resources available.

A note of caution on Data; not all Data is BIG. There is a lot of buzz around the idea of Big Data and it is important to implement this with fidelity to the actual AP CSP standards. Big Idea III is Data and Information. It states: “Data and information facilitate the creation of knowledge.”

So while your students will need to work with some large data sets, these computational techniques are not the only area of focus. We see this in the current draft of the Innovate Performance Task (PT) in which students are asked to write “a description of the relationship between data and the innovation.” For example, a student could describe the data used or produced by the innovation or any privacy issues associated with the innovation and data.

So it is not enough to perform computations on data; students must also critically write about its implications. While the PTs are still in draft mode and may see some adjustment in the language used in the coming year, it is clear that students need to be able to demonstrate the connections between data and discovery.

In my AP CSP course, I teach about data in the second semester, but students work with bits and pieces earlier in the year. During the first semester, we spend a lot of time on how computers represent and store information and how these techniques inform us about the types of problems computers can and cannot solve.

This culminates in our focus on data and information. I cover data while I teach number calculations in coding. For each of my coding units, I use this parallel structure. We cover some programming techniques and then other material in the CSP Framework that relates to the code concepts.

In the Number Calculations unit, I want them to move beyond simple modulo (MOD) operations and really start to think about how data and numbers change our way of knowing. So while coding, they learn about round-off errors and also look back at the topics from the beginning of the year on data representation.

To get them started, I prompt them with a statement related to data, “Blood drive at the local high school reveals 20% of the students were HIV positive.” Then I ask them to independently respond to the question, “What is your immediate reaction?”

After sharing their responses with their partner, I invite them ask me questions. They ask things like: “Is this school in the US?” and “Did only seniors donate?” They keep asking until someone finally asks, “How do we know this is true?” Actually it isn't true; I selected it from a Snopes article.

Next, we discuss why at first they accepted the information as true. For homework, they respond in a journal entry to reflect on the lesson and the impact of data on everything from social media to who owns personal data.

This introduction forms the foundation to begin working with data sets by asking good questions, analyzing the data,

and finishing the unit prepared to complete the Innovate PT. My goal is that students complete this unit prepared to ask and answer questions related to data:

- Is this statement about data true?
- What data is being collected about me?
- How is data stored?
- How has data changed scientific research?

And really, aren't these basic citizenship topics for anyone living on the Internet?

What's Happening in Maryland?

Joe Greenawalt, Dianne O'Grady-Cunniff, Marie desJardins

CS Matters in Maryland (csmatters.org/) is an NSF-funded CS10K project focusing on the new Advanced Placement Computer Science Principles (AP CSP) course. At the heart of “CS Matters” is a collaborative curriculum development process led by a cohort of 13 experienced CS teachers and curriculum developers, professional development for experienced and new high school teachers, and the creation of a platform to develop and distribute the curriculum as broadly as possible. Globally, the curriculum will be disseminated broadly and freely, as a resource for teachers anywhere. Locally, the project's mission is to fulfill an increasing need for CS in Maryland, as identified by a CE21 project that surveyed educators and school systems across the state. CS Matters works with the Maryland State Department of Education and local school systems to promote the course and to provide teacher training.

The CS Matters CSP curriculum was developed with one key goal: to provide all students the opportunity to learn CS within a rigorous and engaging framework. To reach, retain, and teach underrepresented groups, the curriculum is designed to foster welcoming learning environments that are respectful of the diverse strengths of all students. The theme of the CS Matters course is data—where it comes from, how it is collected and made available, how it can be analyzed and visualized, and the impact on society.

The first unit, *Your Virtual World*, informs and involves students in the many ways in which computing shapes their environment. Students study scalable problem solving by participating in citizen science, contributing their thoughts and recording their reactions in daily journals, investigating innovations of particular importance to them, and collaborating with partners and groups. Core lessons from Unit 1 include Impact of Innovation, A Problem Solving Process that Scales, Societal Impact, and Privacy in the Age of Big Data.

The second unit, *Information and the Internet*, continues the emphasis on impact while examining the Internet, its core technologies, and its design. The unit explores how the design and technologies of the Internet affect innovation. Students take on the roles of Internet technologies by acting out the parts these technologies play. The first two units together equip students to complete the College Board's Explore Performance Task.

After focusing on computing tools and impacts in the first two units, the third unit, *Developing Programming Tools*, introduces students to software development using the Python programming language. The unit begins by focusing on the motivation for programming and then teaches the

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fundamentals of procedural programming, including data storage and retrieval, sequence, selection, iteration, and functions. This unit plays a pivotal role that allows subsequent units to challenge students to implement their own code to investigate their virtual world.

Unit 4, *Data Acquisition*, focuses on data, modeling, and simulations, while introducing concepts of probability and statistics. Students address the potential and limits of modeling by developing and testing hypotheses. Using computational thinking and the programming skills, students build and test a model that leverages the power of computing to increase the accuracy of its results.

The age of big data is computational at its core. Unit 5, *Data Manipulation*, orients students to the conceptual foundations and core strategies for managing big data. Students investigate several data manipulation strategies, focusing on common algorithms and methods of evaluating them. The study of algorithms leads to small individual programming projects that acquaint students with the College Board's Create performance task.

Unit 6, *Data Visualization*, serves as a bridge between the introduction to computing and the development of more substantial programming artifacts. This unit includes several options for teachers to strengthen their students' creative programming abilities. The first lessons use EarSketch to engage students in computation through collaborative music composition. Other lessons use Bokeh from Continuum Analytics to equip students to create their own data visualizations.

The original units are being significantly revised this year based on feedback from use in the classroom by the master teachers who collaborated to design and write the curriculum in 2014. This ongoing process of development is expected to continue in 2015, when a cohort of 30 pilot teachers will be trained and will implement the curriculum in their classrooms, producing additional differentiation and scaffolding for the lessons. The outcome of this two-year development and pilot process will be a CSP curriculum that is structured around the ways in which computing affects students' lives. The CS Matters curriculum will equip students to understand these impacts, access and analyze the data driving them and to effectively communicate their insights.

Job Seekers and Employers

Job Seekers: The CSTA Career and Job Center will help you find your next career in our searchable database of CS education jobs. Search CS education jobs in academia and corporate including: CS teacher, technical coordinator/administrator, curriculum developer, K–12 CS education, and others. Post your resume and take advantage of free career tools for job searchers. These services are provided FREE to CSTA individual educator members.

Employers: Begin your search for an exemplary educator by creating a company profile and posting available jobs. And, while you're waiting for applications to arrive, search through the resumes in the database.

To access the CSTA Job Board, visit: cstajobs.acm.org or click the Job Board button from the CSTA homepage.

MARK YOUR CALENDAR

CS Principles Georgia Tech Workshop
June 29–July 2, 2015, Atlanta, Georgia
coweb.cc.gatech.edu/ice-gt/2360

ITICSE (Innovation and Technology in Computer Science Education)
July 6–8, 2015, Vilnius, Lithuania
www.iticse2015.mii.vu.lt

Advanced LEGO Robotics for Educators
July 6–10, 2015, Worcester, Massachusetts
campscui.active.com/orgs/WorcesterPolytechnicInstitute0

2015 CSTA Annual Conference
July 12–14, 2015, Grapevine, Texas
cstaconference.org

RESPECT 2015 (Research in Equity and Sustained Participation in Engineering, Computing, and Technology)
August 13–14, 2015, Charlotte, North Carolina
stcbp.org/respect2015

WiPSCE (Workshop in Primary and Secondary Computing Education)
November 9–11, 2015, London, United Kingdom
www.wipsce.org



For more summer workshops in Massachusetts, visit:
caite.cs.umass.edu/educators/professional_development.html

Check the most recent CSTA events on the CSTA website
csta.acm.org/ProfessionalDevelopment/sub/TeacherWorkshops.html
List your CSTA event by contacting t.nash@csta-hq.org

For the latest and greatest tips & tricks and news & views, check out
The Advocate Blog
blog.csta.acm.org