

ARCS NEWS

Advancing Rural Computer Science

Brought to you by The Center for Educational Partnerships at Old Dominion University

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Announcements



Greetings!

We hope everyone is well and that you had the opportunity to sign up and participate in a virtual Code VA school year professional development meeting for the ARCS cohort. Our theme for November is "What is Computer Science?" It coincides with some exciting developments including the [CS In Your Neighborhood](#) competition that closes at the end of this month, and gearing up for CS week, which runs from December 7th -11th. Please scroll down for clarification about what computer science is, and bite-sized information about CS in the Commonwealth!

The ARCS team has been busy working on CS Integration microcredentials that each ARCS participant is eligible to complete at no-cost and with recertification hours attached. We hope to have these ready to roll out in summer 2021. The microcredentials are based on the Computer Science SOLs. More information and a preview will be coming in the spring!

Since this is our November edition, we wanted to wish everyone a safe and happy Thanksgiving. As always, if you have any questions or comments for us, please don't hesitate to email the ARCS team at tcep@odu.edu.

Concept Corner

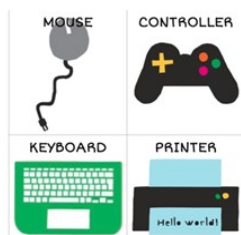


What is computer science?

When the term computer science comes to mind, people often think of computer technicians or topics such as computer engineering, programming and coding, and cybersecurity. Did you know that some of these are broader than computer science itself? For example, someone who fixes computers is known as an informational technician and may work in an information technology (IT) department. They provide technical support by testing, building, installing, and maintaining hardware and software. Computer engineering focuses on designing and building computer hardware. Cybersecurity experts help mitigate malicious interference in computers and their programs.

So, what IS computer science? **Computer science (CS) and computer scientists focus on designing computational methods (also called algorithms), frameworks and data structures to solve important computational problems.** These algorithms are then implemented as computer programs. Computer scientists are also typically responsible for creating software with good coding practices. Of course, this contributes to the work of others in the computing field. To see how, let's take a look at your smart phone. The applications you use, whether it be Zoom, Google, WhatsApp or Contacts were created by computer scientists. The Contacts application has an algorithm that helps sort the list of contact information that is input by you. If you were to break open your phone you would see a lot of small devices (hardware) that were put together by computer engineers. If you run into a problem where you cannot log into your phone or it will not restart you would rely on an IT specialist for support. Updates are made available to fix bugs and other issues that can be detected by cybersecurity specialists. In partnership with these other specialties, computer science makes everyday tasks easier, more efficient, safer, and fun.

Pedagogy Pointers



Lower Elementary Resources

For Lower Elementary: GoOpenVA has K-2 friendly computer science vocabulary word sort that includes imagery to help lower elementary students learn and better understand the kind of technology they will see in computer science lessons. **The lesson is aligned to CS 2.7.**

[Access lesson plan here](#)

Computer Science in the Commonwealth



Computer Science Coffee Talks

The VDOE computer science team is excited to announce that we will be holding monthly **Computer Science Coffee Talks!** These CS Coffee Talks are designed to share VDOE updates, instructional resources, targeted professional development, and computer science opportunities with both teachers and leaders across the Commonwealth. The CS Coffee Talks will be held the **second Monday of each month from 3:30PM-4:30PM** and are available to teachers and leaders. Each CS Coffee Talk will have a follow up email outlining information and providing access to information shared for those that could not attend. If you need additional information or would like to be added to the CS Coffee Talk distribution list, please contact anne.petersen@doe.virginia.gov.

Other Announcements!

CS Ed Week: <http://codeva.info/CSEdWeek>

CS Educator of the Year Nomination Form: <http://codeva.info/CSEducatoroftheYear>

CS in Your Neighborhood Competition Submission Form: <http://codeva.info/CSinYourNeighborhood>

For your reference: Link to the [Virginia CS SOLs](#)

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Old Dominion University

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