

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 had a restful Thanksgiving. The ARCS team is looking forward to winter break and anticipate that you are, too!

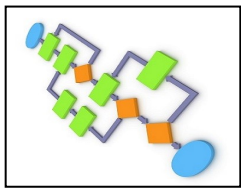
In this newsletter, we are thinking about algorithms. This month's Concept Corner asks us to think about the step-by-step activities we accomplish everyday as examples of algorithms. From brushing their teeth to tying their shoelaces, we imagine that your students will be able to come up with some great examples! For a more direct application of algorithms, you might want to check out the Scratch holiday card lesson in Pedagogy Pointers.

We have one quick announcement: the ARCS Newsletter archive is up and running and will be updated monthly to include past issues for easy access and reference. You can find the archive under the teacher resources section of the ARCS site or access the link directly. [ARCS Newsletter Archive](#)

Have a wonderful holiday season!

The ARCS team.

Concept Corner

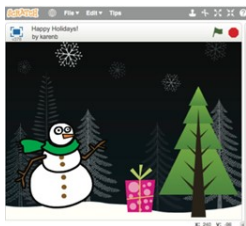


Algorithms and Everyday Life

With increasing use of computers in everyday life, one is beginning to hear the word "algorithm" with greater frequency. What is an algorithm? An algorithm is a sequence of steps to perform a task. And though most associate the word algorithm with computer science, we use algorithms on a daily basis in our own lives. When you follow a recipe for Santa's cookies, you follow several steps in a sequence. This sequence of steps constitutes an algorithm to make your cookies. The first step is to gather your ingredients and materials, the second step is to mix the dry ingredients in one bowl and your wet ingredients in another, and then mix, and so on. Similarly, when you wrap a birthday gift, you follow a sequence of steps like measuring the size of the box to be gift-wrapped, cutting appropriate sized wrapping paper for the box, folding and taping it around the box in a specific fashion and attaching the gift bow. This sequence of steps is an algorithm for wrapping a gift. Different people may use different methods or "algorithms" for gift-wrapping! When you play card games, you often want to keep your set of cards organized by suit or numbers. Unconsciously, you apply a sorting algorithm to do that. While these are examples of simple algorithms they are similar to more complex algorithms that computer scientists devise in that they all are a sequence of precise steps to accomplish a task. Now that you know what algorithms are, think about some of your usual daily tasks and identify if and how you are using algorithms to accomplish those!

Here is a short video called "[what are algorithms](#)" that we hope you find useful.

Pedagogy Pointers



For the Holidays

SCRATCH Ed has an interactive holiday lesson to help students build an interactive, animated holiday card to share with family and friends in the month of December. The holiday card lesson takes approximately one hour and includes a curriculum guide. The lesson is aligned to CS 2.2a-c, 3.2a-c, 4.2a-c, 5.2a-c.

[Ed Holiday Card Lesson](#)

[SCRATCH Ed Holiday Card Instructions](#)

Computer Science in the Commonwealth



Computer Science Education Week is December 7th –13th, 2020

CSEdWeek is an annual call to action to inspire K-12 students to learn computer science, advocate for equity in computer science education, and celebrate the contributions of students, teachers, and partners to the field. <https://www.csedweek>

CodeVA has a virtual week of speakers, family nights, kids activities, and sessions for educators. The schedule can be found [here](#)

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Old Dominion University

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