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We hope you enjoyed your summer! We understand that the beginning of any school year is a busy and challenging time, and we thank you for your commitment to ARCS this year. This newsletter is one way that we keep in touch with all of you and offer timely CS-related resources for elementary educators.

The ARCS team includes faculty members at The Center for Educational Partnerships, many of whom have worked as educators and administrators in Virginia's public schools. We are dedicated to supporting you and look forward to the learning journey we are embarking on together. If you would like to find out more about TCEP, please visit _____

This month, we would like to introduce you to our Education Specialists, Lisa Steffian and Alexis Tharpe, who will serve as your primary contacts and mentors throughout the ARCS Program. Lisa has over 10 years of experience in K-12 and higher education and is especially excited about integrating CS content with nontraditional STEM subjects including social studies and language arts. Alexis has worked as a classroom teacher with over 20 years of experience teaching elementary and middle school students. She served as a science curriculum writer and facilitator integrating CS and STEM activities into the curriculum.

Our topic this month is . What do your students think of when they hear data In today s information-saturated world, making decisions based on data is a skill required in many professions and in our personal lives as well. This issue will share more about this topic and how to weave data science concepts into teaching K-5 learners and preparing them for the future.

If you have any questions about ARCS or CS integration, or have any innovative ideas you would like to share with us, please don t hesitate to reach out to us via email at _____

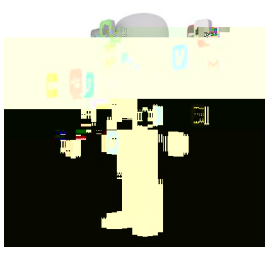
Sincerely,

Data collection dates back to as early as 19000 BC, when tallies were marked on a baboon s bone (called the Ishango bone). Archaeologists have also found examples of data in the Ancient Egyptians cuneiform tablets.

A high quality table that organizes information is critical for data use. Go to your favorite movie theater; you ll likely find information on movie times when you first step into the establishment. Usually, the first column has the names of the movies, with the other columns listing the available times to see the movie, with the time moving forward in sequence from left to right. Imagine if it wasn t this organized! Imagine how much harder and time-consuming it would be finding the movie you re interested in if one of the movie names is on the right, while the other has the name on the left. Imagine if they didn t neatly organize the names under the same column. Worse than that, imagine if the movie times weren t all in the same format. It would not be fun to search through the available times of pm half past and twelve thirty

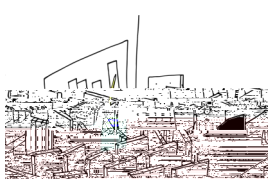
The same goes with teacher gradebooks: imagine if, for some students, you wrote an A or C+ while, for other students, you wrote the actual number grade. In other words, the type of data in a particular column must be kept the same. The student names on the left makes it easy to find the corresponding row to add an assignment s grade, with one column dedicated for that specific assignment. This makes it easy to find the block to write that grade in - find the column, find the row, then locate the correct spot. This way of organizing your students records makes it easier to sort information, spot errors, and report on progress.

Source: _____



___ _____ for the latest lesson plans and activities to help students improve their skills in interpreting and understanding different types of data no matter what topic they are exploring. For example, we love this _____ about using data to predict the length of a shadow from the National Science Teaching Association. For specific teaching methods that promote data literacy, see this _____ article about how to include data science throughout your instruction and across subjects. The activities provided in these resources align with CS K.9, 1.11, 2.11, 3.12, 4.12, and 5.11.

Through the partnership with Virginia Public Media, the Virginia Department of Education is excited to announce two instructional resources. The first is an engaging video series, _____ which focuses on the K-5 Computing Systems content strand of the 2017 *Computer Science Standards of Learning*. Second, is the _____ video series which highlights the impact of computer science within various careers across the Commonwealth of Virginia. These resources can be found on GoOpenVA.



A new school year brings both excitement and challenges as we get to know new students and discover how embracing our differences can support teaching and learning. Now more than ever, it is important to support diversity in the classroom through strategies that will broaden participation in science, technology, engineering and mathematics – including computer science – particularly among underrepresented students in STEM. Throughout the year, we will be sharing information, resources, and strategies designed to engage all learners in computer science teaching and learning. This month, we provide an explanation of a theory developed by Dr. Geneva Gay, Professor of Education at the University of Washington-Seattle. Click ____ to learn more about the theory that the ARCS project will employ and to read more about Dr. Gay s philosophy. Interested in language and culture specific to classrooms in Virginia? The VDOE has developed resources to support Cultural Competency of school employees to help educators understand the persistent academic challenges faced by some members of diverse populations in the Commonwealth. Click ____ for information on this training.

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