

CodeVA

# 2021 SUMMER COURSE CATALOG

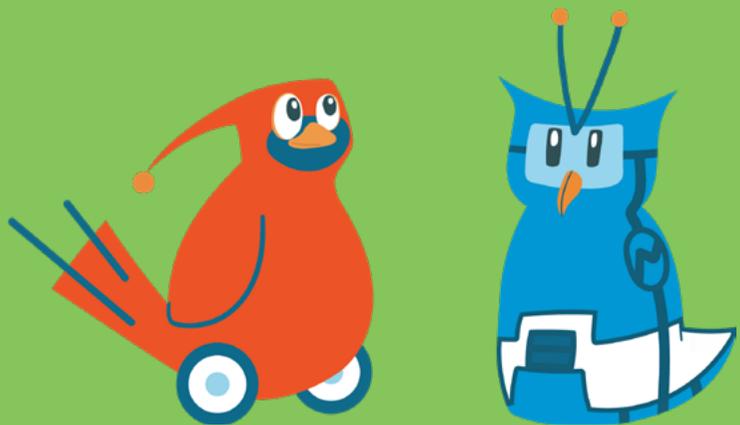




CodeVA is a non-profit that partners with schools, parents, and communities to **bring equitable computer science education to all of Virginia's students**. Based in Richmond, VA, our efforts to work with students, parents, teachers, school districts, and policymakers assume a statewide footprint. Since 2013, CodeVA has taken great strides as the first affiliate partner of national CS education nonprofit Code.org in **making CS a priority for Virginia**.

CodeVA is the statewide, state-funded program to provide **no-cost teacher professional development for school divisions and public school teachers** supportive of the K-12 Computer Science (CS) Standards of Learning. We offer a variety of computer science professional development courses for current Virginia public school K-12 educators and other interested public school education professionals at no cost.

CodeVA's Eureka Workshop is the student programming arm of our organization. Our Eureka Workshop instructors aid CodeVA's mission of building student and family excitement about computational thinking and the theories behind Computer Science. Eureka Workshop meets our mission by **increasing student and family awareness of the intersectionality of computer science and computational literacy with the arts and humanities**.



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# PROFESSIONAL DEVELOPMENT COURSES

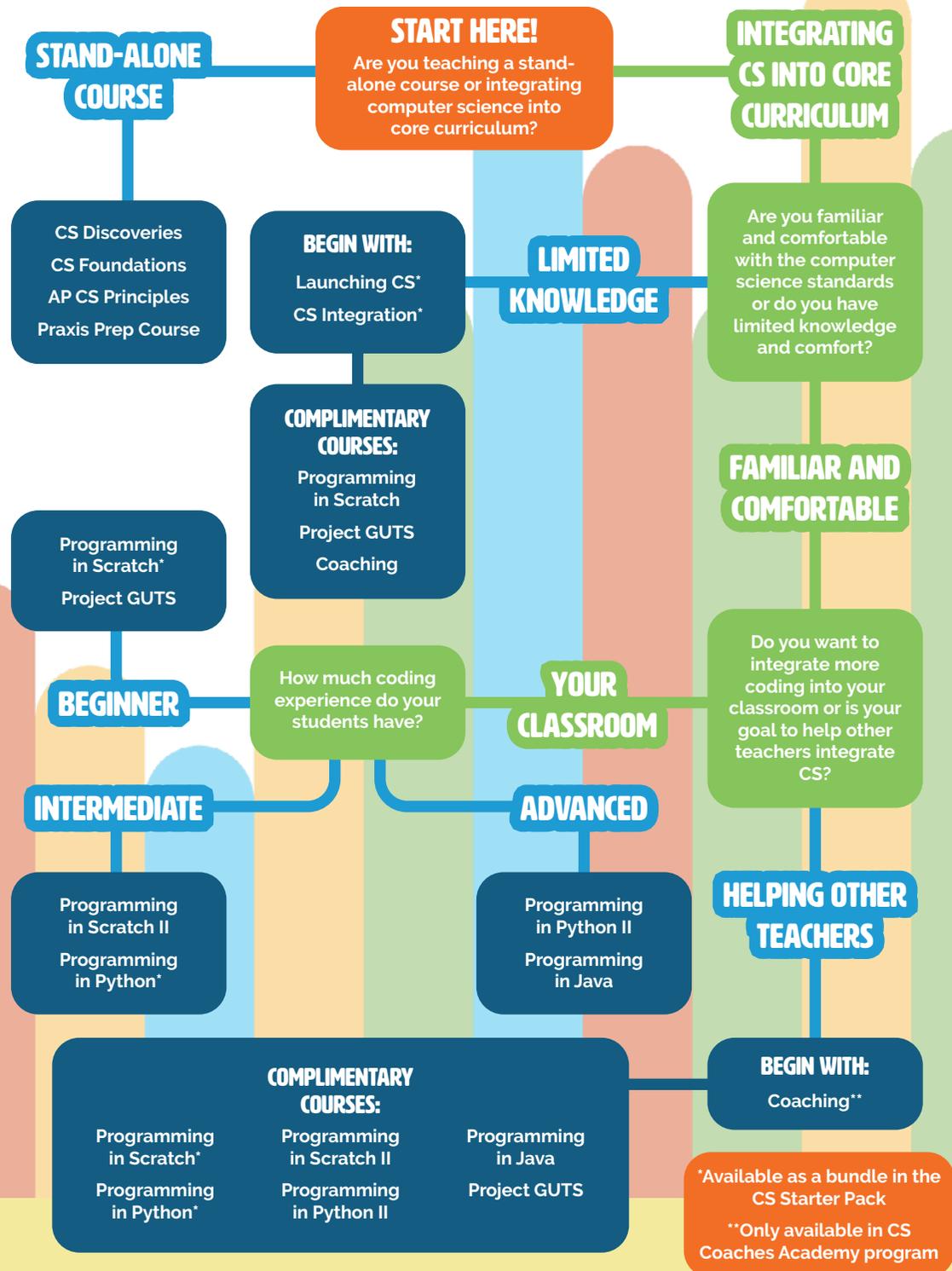
We offer a variety of computer science professional development courses for current Virginia public school K-12 educators and other interested public school education professionals at no cost. We focus on deep content knowledge and CS teaching strategies delivered in an innovative and useful way by our facilitator faculty members who are current classroom educators from Virginia school divisions. Our professional developments make use of our own curriculum developed within the organization and curriculum from outside partners. Computer science may be new to some schools, but to us it's an established learning tool no matter what you teach.

We are hosting 24 separate professional development courses this summer open completely for free to public school educators and other public school education professionals. These courses are available in one day and multi day formats as well as one-time and year-round formats. We provide a large variety of courses in a large variety of formats to be able to meet every Virginia educator where they are and help them bring CS into their classroom, school, or school division.

Find extended course descriptions and register online at:  
[www.codevirginia.org/educators/professional-development/](http://www.codevirginia.org/educators/professional-development/)



## WHICH PROFESSIONAL DEVELOPMENT COURSE IS RIGHT FOR YOU?



# K5 COURSES



JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

## LAUNCHING CS

This program is a one-day session to prepare educators for the inclusion of computer science standards into their regular curriculum. Participants will explore the Virginia Computer Science standards and how to connect these standards to the 5 C's and Profile of a Graduate requirements. Participants will also gain practical, hands-on experience with entry level tools of computer science.

This course is a prerequisite for K5 - CS Integration and is offered as a stand alone class as well in combination with the CS Starter Pack or K5 Coaches Academy.

Participants from different levels of CS knowledge and background will find this training informative and engaging, including: K-5 classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.

**Scratch** - Participants will partake in a variety of projects and collaborate with other educators to assist each other on how to use Scratch and create a plan of integrating computer science in their classroom.

**Python** - Participants will learn the fundamentals of using a text-based programming language and build various projects that can be used in an upper elementary and middle school level classroom.

## CS INTEGRATION

This program is a one-day course designed to help K-5 teachers explore Computer Science and learn how to integrate the VA CS SOLs into core curriculum with students. Participants will gain a deeper understanding of the computer science conceptual strands and focus on methods to help identify overlapping topics and concepts. Through this training, educators will design integrated lessons for their classroom using CodeVA's Computer Science Integration Guide and explore pre-made lessons with our facilitators skilled at integrating Computer Science into their own K-5th grade classrooms.

JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

## CS COACHES ACADEMY

This multi-day program is designed for instructional leaders within a grade or building level and prepares them to lead professional development sessions on the topic of the Computer Science SOLs. Participants will learn how to lead groups of teachers to define what computer science is and develop a working knowledge of the VA State Computer Science strands. The course will also provide an in-depth look at the grade level standards and provide CodeVA developed tools for CS lesson integration.

Participants may include: K-5 instructional coaches, instructional technology staff, specialists or instructional leaders in the building or district.

The program includes online modules covering core content, a 5-day online summer practicum, four follow up sessions during the school year, and a PLC focused on community learning.

JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

Year-Long Course

## CS STARTER PACK

This five-day course will introduce educators to computer science and to help prepare them for integrating computer science into their classroom. Participants will explore the VDOE Computer Science standards and determine best practices of how these can be taught with their everyday curriculum. This course will consist of strategies to use computer science in the K-5 classroom and provide an introduction to a coding platform and language (either Scratch or Python).

Participants may include: K-5th Grade classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level. This training is a 5 session program that includes: K5 Launching CS, K5 CS Integration, and Programming using Scratch or Python.

JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

# MS COURSES



JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

## LAUNCHING CS

This program is a one-day session to prepare educators to include the computer science standards into their everyday teaching. Participants will explore the Virginia Computer Science standards and how to connect these standards to the 5 C's and Profile of a Graduate requirements. Participants will also gain practical, hands-on experience with entry level tools of computer science.

This course is a prerequisite for MS - CS Integration and is offered as a stand alone class as well as in combination with MS - CS Starter Pack or MS Coaches Academy.

Participants from different levels of CS knowledge and background will find this training informative and engaging, including: MS classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.

## CS INTEGRATION

This program is a one-day course designed to help 6-8th grade teachers explore computer science and learn how to integrate the VA CS SOLs into core curriculum with students. Participants will gain a deeper understanding of the computer science conceptual strands and focus on methods to help identify overlapping topics and concepts. Through this training, educators will design integrated lessons for their classroom using CodeVA's Computer Science Integration Guide and explore pre-made lessons with our facilitators skilled at integrating computer science into their own 6-8th grade classrooms.

Participants from different levels of CS knowledge and background will find this training informative and engaging, including: MS classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.

JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

## CS COACHES ACADEMY

This multi-day program is designed for instructional leaders within a grade level or building and prepares them to lead professional development sessions on the topic of the 6-8th grade Computer Science SOLs. Participants will learn how to lead groups of teachers to define what computer science is and develop a working knowledge of the VA State Computer Science strands. The course will also provide an in-depth look at the grade level standards and provide CodeVA developed tools for CS lesson integration.

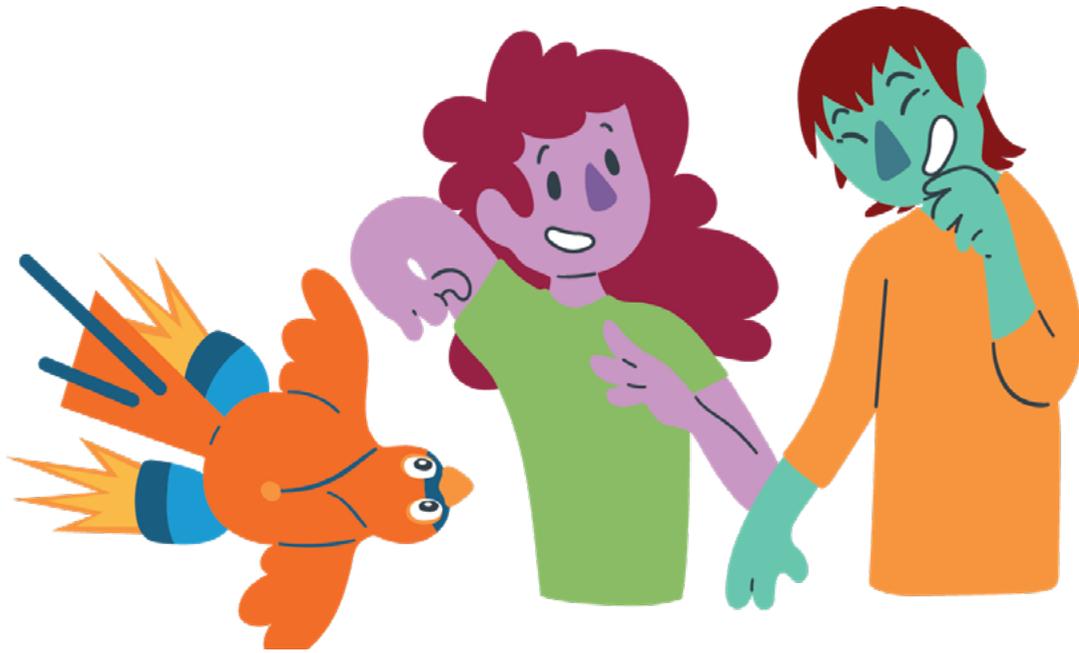
Participants may include: middle school instructional coaches, instructional technology staff, specialists or instructional leaders in the building or district.

The program includes online modules covering core content, a 5-day online summer practicum, four follow up sessions during the school year, and a PLC focused on community learning.

JUNE 2021						
13	14	15	16	17	18	19

JULY 2021						
11	12	13	14	15	16	17

Year-Long Course



## CS STARTER PACK

This five-day course will introduce educators to computer science and to help prepare them for integrating computer science into their classroom. Participants will explore the VDOE Computer Science standards and determine best practices of how these can be taught with their everyday curriculum. This course will consist of strategies to use computer science in the 6-8th classroom and provide an introduction to a coding platform and language (either Scratch or Python).

Participants may include: 6-8th Grade classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level. This training is a 5 session program that includes: MS - Launching CS, MS - CS Integration, and Programming using Scratch or Python.

**Scratch** - Participants will partake in a variety of projects and collaborate with other educators to assist each other on how to use Scratch and create a plan of integrating computer science in their classroom.

**Python** - Participants will learn the fundamentals of using a text-based programming language and build various projects that can be used in an upper elementary and middle school level classroom.

## PROJECT GUTS



Project GUTS is a science, technology, engineering and math (STEM) program for middle school students serving schools and districts nationally. Growing up thinking scientifically means learning to look at the world and ask questions, develop answers to the questions through scientific inquiry, and design solutions to their problems.

This six day program covers the VA Computer Science middle school SOLs and provides instruction on StarLogo Nova, a program specifically designed for creating models and running simulations. Participants will gain a deeper understanding behind computer science and complex adaptive systems and how to integrate CS into their existing SOL science content.

Participants may include middle school science or computer science teachers. Participants may have some computer science experience or may learn this exciting new skill throughout the course. MS Project GUTS may be taken as a stand alone course and there is no prerequisite.

The program includes online modules covering core content, a 6-day online summer practicum, four follow up sessions during the school year, and a PLC focused on community learning.



## ELECTIVE: CS DISCOVERIES



CS Discoveries provides students with opportunities to explore many facets of computer science including programming, physical computing, HTML/CSS, and data. This 6 day course prepares educators to teach the elective Computer Science Discoveries by building and using the modules they will use in the classroom and gain a deeper understanding behind computer science and computational thinking. Student work includes building websites, apps, games, and physical computing devices.

Participants may include middle school computer science teachers. Participants may have some computer science experience or background, but may be interested in Programming with Scratch or Python before or after this course. CSD may be taken as a stand alone course and there is no prerequisite.

The program includes online modules covering core content, a 6-day online summer practicum, four follow up sessions during the school year, and a PLC focused on community learning.

# HS COURSES



## CS FOUNDATIONS (ECS)

Computer Science Foundations is an introductory level course that prepares students for future study in a variety of fields in computer science including, cybersecurity, web design, and networking.

CodeVA's training program uses the Exploring Computer Science curriculum. It was developed around a framework of both computer science content and computational practice. Assignments and instruction are contextualized to be socially relevant and meaningful for diverse students. Units utilize a variety of tools/platforms, and culminate with final projects around the following topics: Human Computer Interaction, Problem Solving, Web Design, Programming, Computing and Data Analysis, and Robotics.

Developed at UCLA in partnership with the Los Angeles Unified School District, the Exploring Computer Science curriculum is the National Science Foundation funded project to expand participation in computer science. It is the foundation of Computer Science for All. The curriculum is a complete day-by-day curriculum, and a unique professional development to help you implement it in your classroom.

In addition to the new Computer Science Foundations course, the Exploring Computer Science training can be used in a variety of classes, including Computer Math and IT Fundamentals.

The initial training consists of six days over the summer, with four follow up Saturday sessions during the school year and a PLC based on community learning. Curriculum is included for free as a part of the program.

## AP CS PRINCIPLES



This 6 day course prepares educators to teach the foundational concepts of computer science to high school students through a hands-on teacher-as-facilitator approach. AP Computer Science Principles is a student-facing college level course that covers the foundational concepts of computer science and challenges students to explore how computing and technology can impact the world. This training specifically works with teachers to prepare for teaching this class to 9-12th grade students and provides a rigorous and relevant look at the dynamic field of computer science.

This AP course was launched in 2016 with the intention of opening computer science opportunities to more students. Developed in a partnership between the National Science Foundation and College Board, the new AP Computer Science Principles class is intended to provide a rigorous and relevant look at the dynamic field of computer science. In order to launch this course, the College Board partnered with universities and organizations to provide "AP Endorsed" curricula that include classroom materials and robust training programs.

CodeVA's training program is provided in partnership with Code.org. Our outstanding training teams are experienced high school AP Computer Science teachers who have worked for the College Board as graders and have helped to shape computer science programs within their schools.

The program includes online modules covering core content, a 6-day online summer practicum, four follow up sessions during the school year, and a PLC focused on community learning.

## PROGRAMMING USING JAVA



This three-day course will introduce educators to Java programming tools and resources, as well as introduce and expand their knowledge with programming using an IDE and/or a Text Editor. Participants will learn how to create programs through using variables, conditionals, and loops. This course consists of strategies to write code efficiently, using inductive learning, and exploring different project domains that use Java while collaborating with other educators. Throughout the course, participants will learn through participation in a variety of projects and collaborate with other educators to assist each other on how to use the application and how to integrate these concepts into their classroom content.

Participants may include: 9th-12th Grade computer science/programming teachers, curriculum writers/leads for high school math/computer science, and teachers who want to gain an introductory experience with a text-based programming language.

The program includes online modules covering core content, a 3-day online summer practicum, four follow up sessions during the school year, and a PLC focused on community learning.

# NON-GRADE SPECIFIC COURSES

## PROGRAMMING USING SCRATCH

This three-day course will introduce educators to the Scratch programming tool and block-based programming, basic understanding of programming concepts, and understand best practices for integrating programming into K-8th classrooms. Throughout the course, participants will learn through partaking in a variety of projects that will immerse them into Scratch programming. They will collaborate with other educators to assist each other on how to use the application and how to integrate this into everyday classroom content. At the end of each session, educators will be given the opportunity to reflect on what they learned and how it could be used in their own classrooms.

Participants may include: K-8th classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.



## PROGRAMMING USING PYTHON

This three-day course will introduce educators to Python programming tools and resources, as well as introduce and expand their knowledge with programming using the Replit platform and/or a Text Editor. Participants will learn how to create programs through using variables, conditionals, and loops. This course consists of strategies to write code efficiently, using inductive learning, and exploring different project domains that use Python while collaborating with other educators. Throughout the course, participants will learn through partaking in a variety of projects and collaborate with other educators to assist each other on how to use the application and how to integrate these concepts into their classroom content.

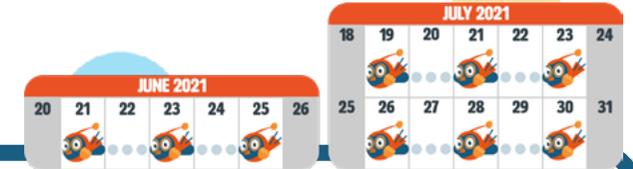
Participants may include: 3rd-12th Grade classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.



## PROGRAMMING USING SCRATCH II

This three-day course will build upon participant's knowledge of Scratch programming tools and concepts as well as introduce and expand their knowledge on using variables, operators, sensing blocks, and My Blocks within the programming platform. These new blocks will allow participants to learn and create different types of programs with a focus on debugging and determining ways to integrate Scratch programming into K-8th classrooms. Throughout the course, participants will learn through partaking in a variety of projects and collaborate with other educators to assist each other on how to use the application and how to integrate these concepts into their classroom content. Programming using Scratch is a prerequisite to this course.

Participants may include: K-8th classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.



## PROGRAMMING USING PYTHON II

This three-day course will build upon participant's knowledge of the Python programming language, tools, and concepts as well as introduce and expand their knowledge by using functions, lists/dictionaries, and functions with parameters. These new concepts will allow participants to learn and create different types of programs with a focus on debugging and determining ways to integrate programming into 6-12th grade classrooms. Throughout the course, participants will learn through partaking in a variety of projects and collaborating with other educators on how to use the application and how to integrate these concepts into their classroom content. Programming using Python is a prerequisite to this course.

Participants may include: 3rd-12th grade classroom teachers, instructional technology staff, specialists, curriculum writers, or instructional leaders at the building or district level.



## SCHOOL COUNSELOR TRAINING

This 3 day course is designed for Middle and High School Counselors and administrators to explore what computer science opportunities exist for their students and how to increase awareness and participation. Participants will create a plan to increase recruitment and engagement for CS courses and explore how schools and divisions can increase equitable access to CS courses.

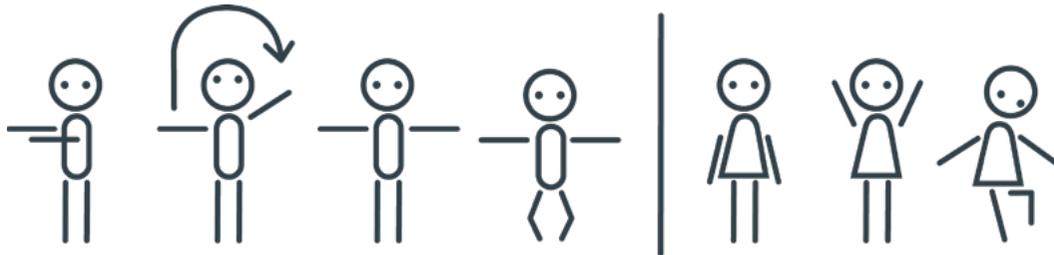




At Eureka Workshop we know that screens and the internet is not always the easiest way to learn. So we have Project CS Snail Mail, a booklet that is mailed monthly to students and families as well as distributed through partner organizations. Each issue has a computer science theme that is explored through activities and information. Snail Mail is free and you can register to have it arrive in your mailbox, on our website. Here are some examples of activities from past issues.

## bee dance

Did you know that bees dance to share directions to flowers? By moving in specific patterns and changing tempo, they can share how far away and in what direction the hive needs to travel. This is called the "Waggle Dance." You can make your own waggle dance and secretly talk to friends or parents, but you have to agree on what your dance means!



"I could eat a whole hamburger!"

"You're doing so great!"

Come up with your own waggle dance to:

- Spell your name
- Ask for help reaching a high shelf
- Order a sandwich

Use the extra space below to draw your own dance language!

## intro to ciphers

One of the earliest known forms of encryption is called a substitution cipher. We will be using a simple form of a substitution cipher where you replace each letter of the alphabet to the left or right. This is also called a Caesar cipher, named after the Roman leader Julius Caesar who used this kind of cipher to send secret messages.

The example here shifts the alphabet 3 to the right. So, the letter A becomes the letter D, the letter B becomes the letter E and so on. To use this form of a cipher to encrypt a message, we would use our new alphabet to create our message.



### Original Alphabet

ABCDEFGHIJKLMNOPQRSTUVWXYZ

### Ciphred Alphabet

DEFGHIJKLMNOPQRSTUVWXYZABC

### Our Secret Message

*Plaintext:* Hello World

*Ciphertext:* Koor Zruog

The number of shifted letters and the direction shifted is our encryption key, so for someone to decrypt the message they would need to know our encryption key and then they would run through the same process *in reverse*.

Decrypt the following messages encoded with the encryption key above!

*Ciphertext:* FRGLQJ

*Plaintext:* \_\_\_\_\_

*Ciphertext:* VWHDP

*Plaintext:* \_\_\_\_\_

*Ciphertext:* FRPSXWHU VFLHQFH

*Plaintext:* \_\_\_\_\_

# logic puzzles

1

Three pirates discover 100 gold coins, and must decide how to divide up the treasure. They decide that the oldest pirate should propose a distribution, and all the pirates (including the proposer) will vote on whether they will accept the distribution, or throw the proposer overboard, in which case the next oldest pirate will propose a distribution, continuing the game. Ties result in an accepted distribution.

Assuming all the pirates are perfectly rational, extremely greedy, and bloodthirsty (so they will vote to throw the proposer overboard unless they earn more coins otherwise) how many coins can the oldest pirate earn?

2

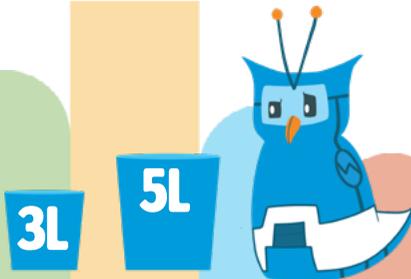


Four jolly men sat down to play,  
They played all night 'till break of day.  
They played for gold and not for fun  
With separate scores for everyone.  
When they came to square accounts,  
They all had made quite fair amounts.  
Can you the paradox explain,  
If no one lost, how could all gain?



3

If you had an infinite supply of water and a 5-liter and 3-liter bucket, how would you measure exactly 4 liters? The buckets do not have any intermediate markings.



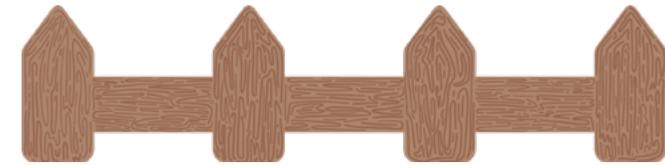
4

There are 20 different socks, of two types, in a drawer in a completely dark room. What is the minimum number of socks you should grab to ensure you have a matching pair?

You have 1,000 bottles of juice. One contains poison and tastes bitter. How do you find the poisoned bottle using the smallest number of sips?



A farmer challenges an engineer, a physicist, and a mathematician to fence off the largest amount of area using the least amount of fence. The engineer made his fence in a circle and said it was the most efficient. The physicist said that fencing half the earth was the best. The mathematician laughed at the others and, with his design, beat them in the challenge. What did he do?



## seed journal

If you like growing plants, it can be fun to keep a journal of your plant's growth! As your seeds begin to sprout, you can collect data and chart their progress! At the bottom of this page is an example entry. Every day of the week, we marked the weather to show how much sunlight the seeds were getting and if we watered them or not. At the end of the week, we drew a picture of all the progress the seedlings had made!

Check out our journal template on the next page, or get creative and come up with your own format for charting plant data!

Weather	Water



5

6

## WEEK 1

Weather	Water

## WEEK 2

Weather	Water

### logic puzzle answers

1. The middle pirate wants to toss the oldest pirate overboard so that he gets to propose the coin split. He knows that even if the youngest pirate votes against him, he will win in a tie. Then he can propose keeping all 100 coins.
2. The youngest pirate knows that if one pirate is tossed overboard, she won't get any coins because she'll lose that tie. The oldest pirate can propose that the youngest pirate gets only one coin, the oldest gets 99, and the middle pirate gets none. On the middle pirate will vote no, so the proposal will pass.
3. The men were musicians!
4. Fill the 3-liter bucket first and pour it into the bigger bucket. Fill the 3-liter bucket again, and carefully pour the contents into the 5-liter bucket, leaving 1 liter in the smaller bucket. Empty the 5-liter bucket and pour the remaining water from the smaller bucket into it. Fill the 3-liter bucket once more and again empty it into the 5-liter bucket, leaving you with 4-liters.
5. 11 socks. The suggested answer given here is more to show an appreciation of the real world rather than an understanding of theory, statistics, etc. With this in mind, the only way to safely "ensure you have a matching pair" is to pick 11 socks.
6. 10 sips. Take a small sample from each of the first 500 bottles, mix them together, and take a sip. If it tastes bitter, it's one of those 500, if not, it's the other 500. Then take samples from 250 of the 500 that tasted bitter and keep halving until you find the exact bottle.
7. Well, this cheeky chappy decided to build a fence around himself. He then claimed he was outside the fence.

# SPONSOR SPOTLIGHT



# EUREKA WORKSHOP

Eureka Workshop is the student programming arm of our organization. Our offerings aid CodeVA's mission in getting students (and their families) excited about computational thinking and the theories behind Computer Science. We believe that creative problem solving is the foundation of most Computer Science concepts and methods of computational thinking. By using art projects to introduce these concepts, we break down any preconceptions about coding or programming while fostering creative thinking.

In Summer of 2021 we will be offering virtual classes in one and two week formats. One week classes meet daily Monday through Friday. Two week classes meet on Mondays, Wednesdays, and Fridays. All classes will have additional times for grown-ups or students to sign up for extra Q & A. The following schedule is our base offerings. All classes that meet more than once require a "tech check-in" prior to the first class. More classes will be added to our website for registration through the Spring. All classes are subject to change.



# ELEMENTARY CAMPS



## DOODLEJAM

Elementary

Visiting guest artists and Eureka Workshop instructors provide a space for students to work together collaboratively on prompts and their own ideas too! While drawing together, students get to learn about the different tools our guest artists use in their profession and participate in some exercise to get their creativity flowing.

July 6th

10:00AM—12:00PM

## COMPUTER SCIENCE AT A SNAIL'S PACE

Elementary

A great way to build computational thinking skills is through unplugged activities. In this two hour workshop Eureka Instructors will lead students through an activity or two from our Computer Science Snail Mail publication.

July 8th

1:00PM—3:00PM

## CRITTER CODE

Upper Elementary

What better way to learn than with a friend? In our Critter Code class, participants start by creating their own Critter character on paper, sew a sock animal, and then take their new friend digital, programming in Scratch to make their Critter into a Sprite! This critter opens the doors to creative computational thinking and problem solving while also producing a snugly friend. Through arts and crafts, imagination, and Computer Science skills our participants will bring a character of their own making to life in person and on screen!

June 21st to July 2nd

Mon, Wed & Fri

1:00PM—3:00PM

## PIXEL ART

Upper Elementary

Pixel Art is an enduring and accessible form of art production for video games! In this class we will learn techniques used to create art for games and how to animate them, as well as a brief history on why pixel art looks the way it does!

July 12th to 16th  
Daily  
11:00AM—12:00PM

## WRITING FOR VIDEO GAMES

Upper Elementary

Designing a video game means making smart choices. How do you make a game playable and fun? What's too easy or too difficult? We'll talk about writing a smart game and then make our own video games in Twine. No previous game-making or coding experience necessary. It is not a requirement but, an excellent follow up to this class would be Retro Game Design in session 5.

July 26th to 30th  
Daily  
10:00AM—12:00PM

## RETRO GAME DESIGN IN SCRATCH

Upper Elementary

Learn the building blocks of coding by creating your very own pixelated and lighthearted retro video game! Students will create a game in a vintage style while using Scratch. It is not a requirement but, this is an excellent follow up to our class in session 4, Writing for Video Games.

August 9th to 20th  
Mon, Wed & Fri  
10:00AM—12:00PM

## SQUISHY CIRCUITS

Upper Elementary

Students will create squishy circuits using play-doh, battery packs, LEDs and bits of wire. Electricity likes to travel in circles. That circle is called a circuit. The electricity is inside the battery. It flows through the circuit like water. When the electricity goes all the way around back to the battery, the circuit is complete and the lights will shine bright. Students build your own circuit with supplies mailed out ahead of class.

July 7th 11:00AM—12:00PM

# MIDDLE SCHOOL CAMPS



## EARSKETCH

Middle School

Create digital music using Earsketch, a coding based DAW (digital audio workstation) that arranges recorded sound. Students will use sound bites to make beats and create original songs with Python code. Learn about music history, creating a mood, and changing the qualities of sounds with effects.

June 21st to 25th  
Daily  
1:00PM—3:00PM

## VIRTUAL CLAY

Middle School

This course is a 2 hour workshop exploring the topic of 3D sculpting that simulates working with clay. This workshop will be an introduction to the tools and techniques used in 3D sculpting. Students will be provided with free tools to start learning 3D sculpting and resources to continue their education afterwards.

June 21st to 25th  
Daily  
1:00PM—3:00PM

## SCRAPPY ROBOTS

Middle School

Using a combination of supplies mailed to them, as well as some scrappy parts (maybe a hidden treasure in the recycling bin) students will create a robot or two. There will be no other robot like this one as it will be designed and created by the student. These creatures will be simple in their movements but limitless in personality.

July 9th

1:00PM—3:00PM

## 3D DESIGN & PRINTING

Middle School

Learn skills to create and design unique objects with 3D modeling software. This will be an engaging course using 3D Slash to design and build 3D Printed objects. Selected prints from the course will be able to be printed and shipped directly to you!

July 12th to 23rd

Mon, Wed & Fri

1:00PM—3:00PM

## PIXELS VS. VOXELS

Middle School

What on earth are pixels and voxels? This is the class to figure it out! Week one students will explore the art of pixels and learn techniques used to create art for games and how to animate them. Week two they will expand into the three dimensional world of voxels.

July 26th to August 6th

Mon, Wed & Fri

1:00PM—3:00PM

## SEO FOR CREATORS

Middle School

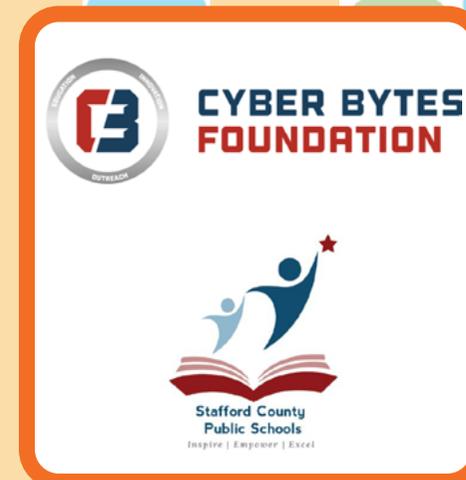
When someone plugs your name into Google, what shows up? In this class we will be creating online portfolios to document your skills, hobbies, and thoughts. We'll use Wordpress and make a blog that you can use to showcase the parts of yourself that you want to share. Take advantage of SEO (Search Engine Optimization) by learning how to make original content and share it responsibly. This is a great fit for budding content creators, creatives that need a professional portfolio, or anyone that wants to be more searchable.

July 26th to August 6th

Mon, Wed & Fri

1:00PM—3:00PM

## SHOUTOUT TO OUR TRAINING HUB PARTNERS ALL ACROSS VIRGINIA!



The image features a central blue circle containing the text "CodeVA". Below this circle are four social media icons: Facebook, Instagram, LinkedIn, and Twitter. The background consists of a series of colorful, rounded vertical bars in shades of blue, orange, green, and yellow. At the bottom, there are stylized blue waves with white foam.

CodeVA



[www.codevirginia.org](http://www.codevirginia.org)