



Virginia Association of Counties

ACHIEVEMENT AWARDS



APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 1, 2020.** Please include this application form with electronic entry. If you do not receive an email confirming receipt of your entry within 3 days of submission, please contact [Gage Harter](#).

PROGRAM INFORMATION

County: County of Henrico

Program Title: Advanced Digital Literacy Skill Building at the Library

Program Category: Customer Service

CONTACT INFORMATION

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SIGNATURE OF COUNTY ADMINISTRATOR OR DEPUTY/ASSISTANT COUNTY ADMINISTRATOR

Name: Brandon Hinton

Title: Deputy County Manager for Administration

Signature: 

Program Overview

Henrico County Public Library (HCPL) sought to modernize its services and meet the needs of jobseekers with advanced digital literacy and skill-building classes in its Digital Media Labs. HCPL opened its first Digital Media Lab at the Libbie Mill Library in 2015 after piloting the concept at its Twin Hickory location. Library staff created curricula to develop digital literacy skills in applications like Adobe Creative Suite software, 3D modeling and printing, and coding while continuing to offer traditional computer classes like Microsoft Office and Internet Basics.

The Varina Area Library opened in 2016 with a Digital Media Lab, and staff created applied concept classes like 3D printed crafting, video game programming, and other engaging subjects that offered an accessible entry point to learning digital skills for patrons of all ages. The new Fairfield Area Library opened in 2019 with a Digital Media Lab, and HCPL updated the Twin Hickory and Tuckahoe Area Libraries' labs with comparable technology to the existing labs. Now all five Area Libraries, one in each magisterial district in Henrico County, provide free access to high-tech digital literacy education and digital content creation tools, removing barriers to developing digital skills.

Problem/Challenge/Situation Faced by Locality

During and after the recession of the mid-2000s, competition for jobs increased and technological literacy became a critical job skill. This threatened to leave behind older job seekers, or those without access to expensive digital tools. Public libraries were faced with a challenge to meet the needs of jobseekers, and at the same time, needed to modernize lest they lose relevance in a technology-driven world. In response, the maker movement took hold in many public libraries, and Henrico County Public Library was inspired by the idea of providing tools to create things. Combining the ideas of the maker movement with a desire to meet community needs for access

to new technologies, members of the HCPL Futures and Trends Committee developed a concept and researched equipment, hardware, software, and best operational practices. HCPL administrators worked with library staff to pilot a program for what they termed a “Digital Media Lab” (DML) at the Twin Hickory Library in 2014. The pilot was a proving ground to test possibilities and gauge public demand for digital services like advanced software and 3D printing at the library and was immediately popular. In the following years, the library worked to expand digital literacy skill-building classes and workshops in their Digital Media Labs throughout the county, to ensure that residents needing digital technology could access it at their local library.

How Program Fulfilled Awards Criteria

Advanced digital literacy classes at HCPL build advanced digital literacy skills for library users free of charge. Access to resources and technological learning is a cornerstone of public library service. These innovative programs meet community needs for digital skill-building as well as the library’s need to adapt its services in an increasingly technology-driven world. While the upfront cost of computers with advanced processing power, and the recurring costs of software licenses could prove prohibitive for some library systems, HCPL’s phased approach to implementation of county-wide Digital Media Lab services is something many libraries across the state could emulate. Offering Adobe Creative Cloud or 3D Printing could begin at a single library location or even a single workstation within a library, and grow from there based on community demand. HCPL’s programs also show that free, open-source software can also be used successfully for quality digital literacy instruction. Public Libraries have always been a great equalizer, providing access to information and resources at no cost. The advanced digital literacy skills taught in the Labs bring this concept into the digital age.

How Program Was Carried Out

Digital Media Labs at Henrico County Public Library were borne from a desire to provide access to digital skill-building and literacy for patrons to be competitive in the modern job market and for people who cannot afford high-tech equipment and software at home. HCPL was additionally inspired by the maker movement and motivated by modernizing library services to include digital content creation. The Digital Media Lab concept was piloted using a mix of paid and open-source software to create and manipulate digital content like podcasting, photo and video editing, and 3D printing and design. The pilot required a retrofit of an existing computer lab. The Teen Services Librarian at Twin Hickory Library, who had previously worked in graphic design, developed introductory classes for the community to explore the lab. When HCPL's new Libbie Mill Library was in its design phase, this staff member provided invaluable assistance in planning the first full-service Digital Media Lab, having accrued knowledge of these technologies and a great deal of community feedback. The new Libbie Mill Library and its Digital Media Lab opened in October 2015, replacing the former Dumbarton Library in an urbanizing area of Henrico County. Staff was hired for the lab who had advanced digital skill sets, and other new hires and longtime employees learned these skills through training due to the presence of the lab. The librarian at Twin Hickory was promoted to be head of the new Teen Services and Digital Media Lab department at Libbie Mill and worked with staff to develop digital literacy classes.

Classes at the Libbie Mill DML began that November with "Introduction to the Digital Media Lab," which provides patrons an overview of the software and equipment available to them in the Lab. The class is what HCPL staff have termed an "exploration class," a more open-ended, beginner level class. By January 2016, patrons could attend 3D printing and design classes, which proved to be very popular. Libbie Mill's Teen Services and Digital Media Lab staff were primarily responsible for developing the DML's curricula, from deciding which programs should be featured

to designing class handouts and eventually teaching the classes. Designing classes usually took anywhere from a few weeks to a few months. For some classes, library staff tested their work by teaching other staff in order to get feedback before finalizing the curricula for the public.

Many of the classes in the lab are designed to give patrons a basic overview of a specific program, whether using free, open-source software such as Audacity or subscription-based software such as Adobe Photoshop. Libbie Mill staff created classes in Adobe Photoshop, InDesign, Premiere, and Illustrator, 3D printing and design, Podcasting, Video shooting, digital photography, digital photo restoration, and coding. Classes are repeated at least twice throughout the year for different age groups, usually teens (grades 6-12) and adults. Due to high interest, some classes, such as 3D Printing and Design and Podcasting Basics, were adapted for an elementary school audience along with an adult. Classes at the Libbie Mill DML are incredibly popular, and registration often fills up well in advance. To meet the high demand, staff make sure to regularly schedule classes, and carefully consider patron feedback when planning new classes to ensure their efforts are meeting the greatest needs.

In order to engage children and families with the Lab, staff offered informal learning opportunities like the Family Maker Lab program to give families the chance to work together on a tech-related project. Family Maker Labs combine learning about the technology available and applying that learning to create something, such as using the green screen and photo editing software to take family photos.

The Varina Area Library became the second HCPL location to open with a complete Digital Media Lab in June 2016. Varina staff opened in a rural part of the county's East End with lower population density and a higher poverty rate than the county average. The previous Varina Library did not

have a separate teen services department or space within the library. Staff at the new Varina Area Library faced a challenge to create programming for the Digital Media Lab that would entice people of all ages and with a wide variety of needs to make the drive to visit the library. The Teen Services and Digital Media Lab Supervisor at Varina was an expert in young adult engagement with an arts background. She led staff at Varina to embrace Digital Media Lab technology and created a diverse roster of programs with broad appeal. Staff tweaked existing classes from Libbie Mill to create programs on Adobe Creative Cloud software like Photoshop, InDesign, Premiere, and Illustrator. Understanding their library location was a destination, they created intergenerational and interdisciplinary programming that incorporated Digital Media Lab technology: for example, the 2018 program Women & Girls in STEM featured a panel discussion of women from STEM careers, a book discussion and screening of *Hidden Figures*, and a technology petting zoo in the Digital Media Lab.

Varina Library has taken the concept of Family Maker Labs to new heights, creating applied STEM and STEAM learning workshops that change on a seasonal basis to engage their community with the resources of the DML. Teen-focused programs include: 3D Printed Halloween Costumes, Choose Your Own Adventure Video Game Design with Twine, How to Build A Robot, Code With Friends, Circuit Building, and Game Coding with Roblox. Tweens (grade 4-6) and their parents might attend a Minecraft gaming session. Programs with teen and adult appeal include Podcasting Basics, Webpage Design Basics: HTML, Webpage Design Basics: CSS, and Introduction to JavaScript. Family programs have included DML Petting Zoos and a Family Photo Booth program that utilized the Lab's green screen and photo editing software. Programs are advertised through a brochure produced in-house that typically indicates multiple age groups suitable for each program. This provides extra convenience for families with multiple children who

may need to drive 10 or 15 minutes to reach the library. These programs often see registration fill up well in advance of the program date.

The Varina Area Library serves a community that has above average rates of residents experiencing poverty, which may result in reduced access to technology for those residents. The presence of the DML at Varina Library helps level the playing field for young people and adult jobseekers to learn vital digital skills, so they can be successful in school and in the job market. Understanding the community has been a key component of the success of Varina's DML, and library staff work with local schools and other community partners, and monitor patron feedback, to ensure they are meeting community needs.

The Twin Hickory and Tuckahoe libraries were updated with DML capability in 2018 and 19, and in October 2019 the new Fairfield Area Library opened a fully outfitted and staffed Digital Media Lab. Now, DML technology is available to residents in each of Henrico County's five Magisterial Districts. Existing curricula and workshop instructional plans are shared between the staff at all locations as needed. All libraries with a DML offer Open Lab Hours almost daily and continue to host traditional computer classes covering Microsoft Office and basic internet use. Open Lab Hours allow patrons to drop into the library to work on digital media projects, meaning that students, freelancers, entrepreneurs, and those looking to increase their digital skills can use Adobe Creative Cloud or computers with high processing speeds for free at the library. Patrons are encouraged to bring their own thumb drives, staff-produced instructions and curricula are available to encourage self-directed learning, and staff provide limited assistance depending on availability. Under some circumstances, members of the public are allowed to reserve the entire Digital Media Lab to work on projects like audio recording or green screen photography or video. A system-wide planning committee meets monthly to plan for the purchase of kits and gadgets

useful in teaching programming and other digital skills. The committee has successfully advocated for the purchase of Codey Rocky kits, Kano coding kits, Augmented Reality cubes, and a Google Explorer VR set, among other educational devices.

Between all five labs, thousands of Henrico residents engage with advanced technology at Henrico County Public Library each year for free. Staff have ensured that the public can engage with these resources regardless of age or skill level by providing a wide range of programs and class types. HCPL's investment in hardware, software, and staff training to create Digital Media Labs is increasing access to vital digital technologies, teaching digital literacy, and improving job readiness.

Financing and Staffing

HCPL outfitted Digital Media Labs across the county over the course of five years after a successful pilot and using a phased approach in response to demand. Below are the items purchased to support the advanced digital literacy classes at HCPL. For some items, less expensive alternatives are available. For example, library systems could use open-source software instead of subscribing to Adobe Creative Cloud. PCs, 3D Printers, and digital cameras vary in price depending on specifications and features. PCs are listed at cost per unit. Library systems with limited budgets could purchase a single PC capable of running advanced video editing, and provide lower processing power PCs for other digital media creation, like photo editing and podcasting. High processing power is not required for coding or basic 3D design.

Item	Cost
Digital Media Lab PC – includes 5 year warranty, server-class PC with advanced video graphics processing	3300
Adobe Creative Cloud per workstation/annually	897
Ultimaker 3D Printer	4200
Air filtering enclosure for 3D printer	4300
Scanner	300
Software for scanner	75
Behringer Podcast Studio Console	180
Desktop microphone for podcasting	40
Canon Rebel T6i Camera with Peripherals, including Rhode Mic	950
Portable Green Screen with Lights Kit	180
TOTAL	14422

Program Results

Digital Media Lab classes are among HCPL's most popular offerings county-wide. Classes in 3D design, Photoshop, Illustrator, and programming languages like HTML and Javascript require registration and often fill up well in advance with a healthy waiting list. At the Libbie Mill Library alone, between July 2016 and January 2020, the DML had 263 programs with 2,276 attendees. These numbers don't include tours, one-on-one technology assistance, or traditional computer classes like Microsoft Office and Internet Basics. The Varina Area Library had a 400% increase in teen program attendance in their first year of operation as compared to the old Varina Library it was built to replace, and a driving force behind this increase was Digital Media Lab programs. Patrons of all ages and skill levels use the Digital Media Lab. Adults and Seniors enjoy family

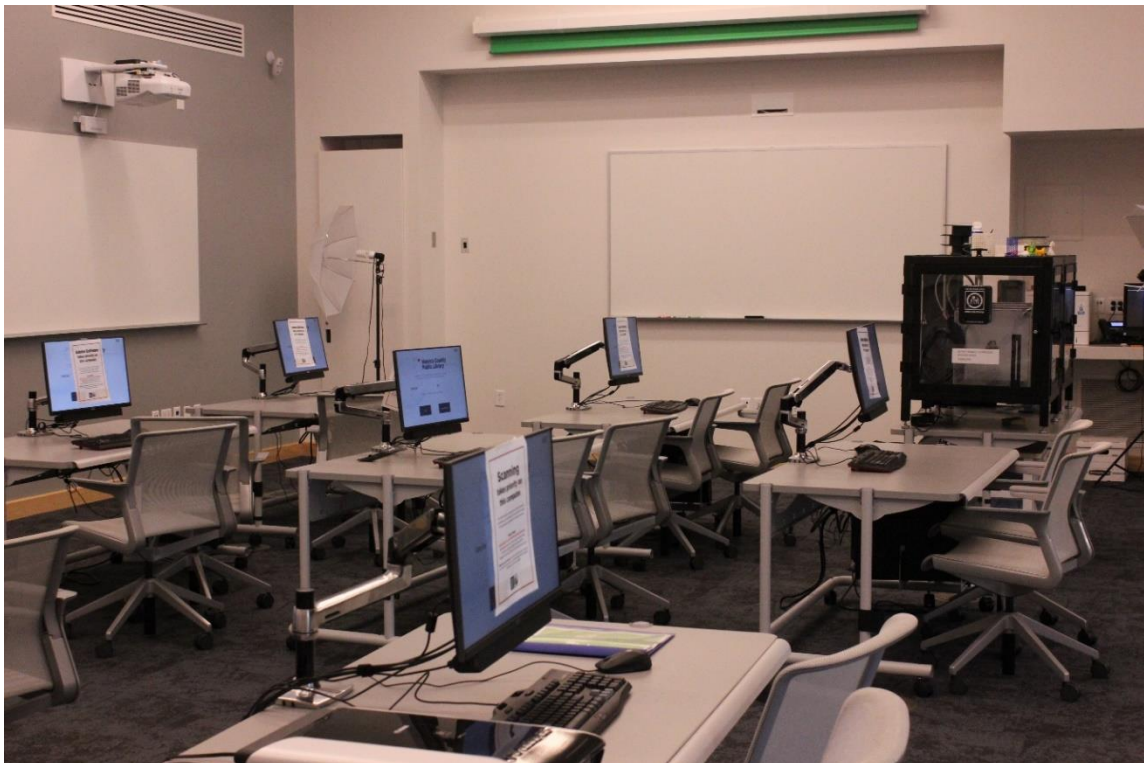
maker labs, VHS to digital transfer, or photo restoration workshops. Teens flock to green screen video editing workshops and Code with Friends club. Tweens fill Minecraft sessions and learn basic programming with Finch robots, and children and their caregivers enjoy exploration programs like Introduction to the Digital Media Lab or 3D Printing and Design for Parent and Child. Attendance is strong and representative of the community with a diversity of age, gender, race, and socioeconomic background among participants. People using the lab include entrepreneurs designing prototypes, startup nonprofits using free Adobe Software, and a teenager who 3D printed parts of a winning fashion design for a contest at the Virginia Museum of Fine Arts. The library has succeeded in providing open access to advanced digital literacy skills to patrons of all ages and backgrounds.

Brief Summary

Advanced Digital Literacy classes at Henrico County Public Library offer instruction on cutting-edge technology to the public free of charge. Members of the public can face barriers to accessing digital content creation tools due to a variety of factors. By situating free and open access to these tools in public libraries, patrons can not only access the tools in convenient community centers, but can access instruction from skilled library staff. HCPL staff have created curricula to teach Photoshop, InDesign, Premier, HTML, CSS, JavaScript, 3D Printing and Design, and audio recording and editing in the library's Digital Media Labs across the county. During Open Lab Hours, patrons can drop in to use expensive software like Adobe Creative Cloud on computers with high processing power for free. These classes support students completing assignments and projects, build skills for workforce development, inspire self-directed learning, and enable entrepreneurship. HCPL implemented Digital Media Labs to support advanced digital literacy skill-building over a number of years in a phased approach. This allowed the library to gauge demand before making significant investments in technology. It also demonstrates that offering

advanced digital literacy tools and instruction is scalable; a library could provide access to these skills and technologies for their community from a single computer workstation outfitted with open-source or paid software, and scale up to full computer labs as resources and demand dictate. Advanced digital literacy skills are now considered essential to many jobs, but were not commonly available to students outside of higher education until recently, and are still not equitably accessible to students. HCPL is establishing itself as an accessible center of digital literacy education and support by providing free, advanced digital literacy skill-building tools and instruction to its patrons.

Advanced Digital Literacy Skill Building at the Library
Supplemental Materials



The
Digital
Media
Lab at
Varina
Library.



3D Printing in the Libbie Mill Digital Media Lab

The Digital Media Lab at Libbie Mill



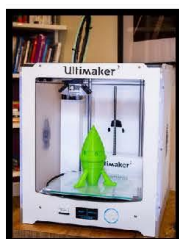
WHAT IS THE DIGITAL MEDIA LAB?

The Digital Media Lab is available for self-serve use by intermediate and advanced users. Basic information about the DML resources can be provided by library staff. Staff may be available by appointment for more in depth assistance. To reserve the Digital Media Lab, you must be age 14 or older and have your HCPL card. You can reserve the Lab for up to two hours. If the next time slot is free when your session ends, you may extend your time for up to two more hours.

WHAT EQUIPMENT DO YOU HAVE?

3D Printing

Create a digital 3D model using a program like Tinkercad or download something someone else designed (Via a service like Thingiverse) and bring it to life in a colorful 3D print in non-toxic resin. Staff will print your requested models for you using one of our Ultimaker 2+ 3D printers. Each print will cost \$0.20 per gram.



Flatbed Scanner and Photo Editing Software

Scan documents and photos, even slides and film negatives with the high-powered scanner. Use Adobe Photoshop to clean up scanned images or edit them to create something new.

Audio Recording and Mixing Station

Record an interview or your thoughts using microphones, studio headphones and an analog mixer. Then use the Audacity software to edit your creation.



VHS to Digital Transfer Station

Transfer precious memories from VHS into a digital format. Then burn your file to a DVD, save it to a thumb drive, or edit it with Adobe Premiere.

Video Gear and Editing Station

Use the digital video camera, green screens and lighting kits to record videos in the Digital Media Lab. Then edit those videos using Adobe Premiere.



Open Lab Hours:

Go to our events page for Open Lab hours:
henricolibrary.org/events

Want to reserve the lab to use the recording equipment? Book it! Go online or ask at the desk.

DIGITAL MEDIA LAB CLASSES

For each class, registration is required*. Please register online, in person, or call (804) 501-1980 x6. Registration begins a month in advance.

Meet the Media Lab

Intro to the Digital Media Lab (Adult and Teen [grade 6+])

Fri, Jan. 4, 3:00 PM

Covers the basics of the Adobe Creative Suite, 3D Printing, VHS transfer, podcasting, scanning, and green screens.

3D Design

3D Printing and Design Workshop

Mon, Mar. 18, 6:00 PM (Children [grade k-5 with adult])

Tue, Mar. 26, 6:00 PM (Adult)

Learn how to create 3D designs, download pre-made 3D models, and see a live 3D printing demo. Please bring a USB thumb drive so you can save your designs.

3D Model Remix with Tinkercad

Tue, Mar. 5, 6:30PM (Teens grade 6-12)

We'll learn how to use the many features of Tinkercad to construct 3D models and discover how to remix existing 3D models to make our own creations

Creature Creation: Digital Design in Sculptis

Sat, Mar. 30, 2:00 PM (Teens and Tweens grade 4-12)

Using Sculptis, we will learn how to 3D model with virtual balls of clay. Get ready for fun as we mold, draw, pinch, pull and paint in 3D to make our very own creatures or design.

Blender Basics for Adults

Wed, Mar. 13, 6:00PM (Adults and Teens grade 6+)

In this class we'll review the basics of Blender, a free and professional open source 3D design software. Prerequisite: 3D Printing and Design Workshop is encouraged but not required.

Imaging & Design

Adobe Photoshop Basics (Adult and Teens grade 6+)

Mon, Jan. 14 6:00 PM

This class will provide a basic overview of fundamental tools and concepts for getting started in Photoshop.

Adobe Illustrator Basics (Adult and Teens grade 6+)

Tue, Mar. 19, 6:00 PM

Learn the basics of Illustrator by using its tools to create a logo. Please bring your own USB drive if you want to save your work. Prerequisite: Familiarity with keyboard and mouse.

Digitizing your family History

Mon, Feb. 4 6:00PM (Adults and Teens grade 6+)

The library has resources for those interested in preserving genealogical information, photos and documents. We'll show you the best practiced ways to scan and manage documents.

Renewing Vintage Photographs

Tue, Feb. 19, 6:00PM (Adults and Teens grade 6+)

We will be going over how to mend rips and tears, heal blemishes and foxing, and correct any color issues on a sample photo. Prerequisite: Photoshop Basics or equivalent knowledge of the program.

Recording & Editing

Motion Capture Character Animation

Tue, Mar. 12, 6:30 PM (Teens grade 6-12)

Experience Motion Tracking and Motion Capture using the Adobe Creative Cloud Software! Bring a character to life using your performance and a camera.

Coding

Learn Coding with Scratch

Sat Jan. 26 2:30 PM (Teens and Tweens)

Learn the basics of coding with Scratch, a visual coding language. This is a workshop for people with very little or not experience with coding.

Video Game Design with Twine

Thur Apr. 11, 6:30 PM (teens and tweens grade 4-12)

Do you like video games, fantasy, or creative writing? Come build an interactive "choose your own adventure" game with Twine.

COMPUTER CLASSES

Registration with your library card is required and begins on the first business day of the month preceding each class. Register online or call 804-501-1980 x5

Computer Basics: Keyboard and Mouse

Thu, Feb. 14, 10:00 AM

Tue, Apr. 23, 2:00 PM

Get familiar with how to interact with a desktop computer. If you know little or nothing about computers and want to learn more, this is the place to start!

Computer Basics: Windows and File Management

Tue, Mar. 5, 2:00 PM

Don't know what to do with all those computer files? We'll help you get organized. Prerequisite: Working with windows or comparable knowledge.

Internet: Getting Started on the Web

Mon, Jan. 7, 2:00 PM

Wed, Apr. 3, 10:00 AM

Learn your way around the Web with a hands-on guided tour.

Prerequisite: Familiarity with keyboard and mouse.

MS Word

Wed, Feb. 6, 10:00 AM

Mon, Mar. 11, 2:00 PM

Wed, Apr. 10, 10:00 AM

Learn how to use the basic features of Microsoft Word.

Prerequisite: Familiarity with keyboard and mouse.

Word: Resumes

Wed, Jan. 16, 10:00 AM

Learn how to create a resume using Microsoft Word.

Prerequisite: Familiarity with keyboard and mouse.

MS Excel

Thu, Jan. 24, 2:00 PM

Wed, Feb. 20, 10:00 AM

Thur, Mar. 28, 2:00 PM

Tue, Apr. 30, 6:00 PM

Learn the basic features of Microsoft Excel.

Prerequisite: MS Word or comparable knowledge.

MS Publisher

Tue, Feb. 12, 10:00 AM

Mon, Apr. 15, 6:00 PM

Learn how to create flyers and brochures with text, borders, and graphics.

Prerequisite: MS Word or comparable knowledge.

MS PowerPoint

Tue, Jan 22, 6:00 PM

Wed, Mar. 20, 6:00 PM

See what Microsoft PowerPoint has to offer and learn how to create slideshows with text, graphics and animation. Prerequisite: Microsoft Word or comparable knowledge.

Introduction to Facebook

Thur. Mar. 14, 10:00 AM

Learn Facebook basics and how to create a Facebook account.

Prerequisites: A working email address that can be accessed from the library; basic knowledge of the Internet.

There are more computer class offerings at other locations throughout the library system. Find out more by checking our website: Henricolibrary.org/events



THE FOLKS WHO BUILT THE MARS ROVERS
HAD TO START SOMEWHERE. JOIN US FOR
AN ENERGIZED LOOK AT DO-IT-YOURSELF
ROBOTICS.

HOW TO BUILD A ROBOT

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BRIDGET WESTHOVEN OF THE WORLD CHAMPION
ROBOTICS TEAM FRC 1086 BLUE CHEESE, WILL
SHARE THE PROCESS AND STORY BEHIND HOW HER
FAMILY BUILT THEIR OWN ROBOT FROM SCRATCH. WE
WILL ALSO HAVE VARIOUS ROBOTS ON HAND FOR
YOU TO EXPLORE.



Henrico
County
Public
Library



TEEN TECH WEEK

MARCH 3-9 2019
AT THE VARINA AREA LIBRARY

Building Circuits

w/ Redstone
in Minecraft

Mon, March 4
@ 6:30 PM

3D Model Remix

w/ Tinkercad

Tues, March 5
@ 6:30 PM

**A WEEK OF TECH PROGRAMMING,
JUST FOR TEENS!**

Game Coding w/ Roblox

Sat,
March 9

@
2:30 PM



VARINA AREA LIBRARY
1875 NEW MARKET RD
HENRICO, VA 23231
(804) 501-1980

Henrico
County
Public
Library

Henrico
County
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HCPL PRESENTS

CALLING ALL CODERS

Hour of Code

COME TRY YOUR HAND AT CODING

DIGITAL MEDIA LAB

LEARN TO CODE AT ONE OF OUR CODING STATIONS

SATURDAY

14

DECEMBER

HCPL HOUR OF CODE AT THE

VARINA AREA LIBRARY

1875 NEW MARKET RD
HENRICO VA, 23231

EVENT BEGINS AT 2PM

WWW.HENRICOLIBRARY.ORG

THE
MAKER'S
LAB

3D PRINTING
COSTUME CREATIONS!



OCTOBER 13TH
2 - 4PM

LEARN HOW TO CREATE
3D COSTUME PROPS!

REGISTER NOW!

