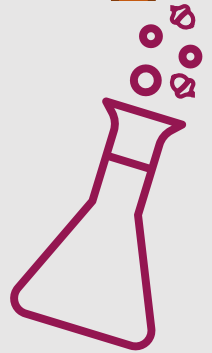




FALL 2020



KENTUCKY GIRLS STEM COLLABORATIVE VIRTUAL STEM EVENT GUIDE



Like so many, KGSC has had to adapt how we serve our members during the Covid-19 pandemic. KGSC's STEM@HOME Directory and seasonal STEM Event Guides remain popular resources for Kentucky families looking to expand STEM engagement. While this STEM Event Guide remains your one-stop for K-12 virtual STEM events, Fall 2020 is the first edition to include regionally produced webinars, workshops, learning aides, and more for Parents and Educators. KGSC will update the guide as opportunities become available.

@kygirlsstem

<http://kgsc.org>



VIRTUAL EVENTS FOR STUDENTS

[Boyle County Library STEAM Events](https://www.boylepublib.org/events/)

<https://www.boylepublib.org/events/>

3D Printing Livestream: Tuesdays, All Ages

Check out our new 3D printer in action!

Tween DIY: Fridays, Ages 9-13

Each week pick up your grab bag of supplies at the library and then follow along with the instructions video on Fridays at 4:00 PM. Ages 9-13.

[Black Girls CODE Virtual Workshops](https://www.blackgirlscode.com/programsevents.html)

<https://www.blackgirlscode.com/programsevents.html>

The World of Bioinformatics with Gro-STEMs: November 23, Ages 16+

This virtual session will cover the fundamentals of Bioinformatics. During this two-hour workshop, students will explore the intersection of biology and computer science.

Bias in AI: December 1, Ages 9-13

Is technology impartial? Can technology perpetuate injustice? We're teaming up with A.I. For Anyone—a nonprofit centered on improving AI literacy—to host a virtual discussion that will explore the prevalence of bias in artificial intelligence and how we can tackle the issue. During this workshop, we will discuss how AI algorithms can bake in structural biases and how we can mitigate the associated risks.

[Camp at Home with KMAC](https://www.kmacmuseum.org/camps)

<https://www.kmacmuseum.org/camps>

Order by December 6, Ages 5 – 11

KMAC's Camp at Home Boxes contain supplies and instructions for five days of hands-on maker projects that don't require any screen time. Campers will be able to get their hands dirty and practice skills and techniques with fun materials, tools and guides. Pre-recorded videos will be available to help your camper will be able to complete all the activities.

[Camp Invention Connect](https://www.invent.org/induction)

<https://www.invent.org/induction>

December 28 – 31, Grades K – 6

Camp Invention Connect™ delivers imagination and high-energy fun right to your doorstep! This flexible program redefines the learning experience with minimal screen time and engaging activities that build an innovation mindset.

[Campbell County Public Library Online Programs](https://www.cc-pl.org/events)

<https://www.cc-pl.org/events>

CCPL Roblox Club: November 14, 21 and December 5, 12, 19, Ages 8-14

Join the CCPL Roblox Club where we will play different Roblox games every week on private VIP servers. Play small private games with friends you may not be able to see right now and other local kids! The specific game to be played will be announced closer to the actual date.

Coding Club: December 3, Grades 1-5

Start your coding journey or sharpen your coding skills during our Coding Club. This Zoom club is for coders of all experience levels and reading abilities. Even pre-readers are welcome!

Cincinnati Observatory YouTube Program: November 25 at 4pm

The Cincinnati Observatory will be giving a lesson on some of the celestial events happening during the month of November.

Minecraft Club: December 14, Ages 8-14

Join other local players in a virtual world, fighting monsters, building large projects together, and hanging out with others. All this from the safety of your own home! If there are any questions, and for the server IP please email Clara at cqemer@cc-pl.org.

[Club SciKidz Virtual STEAM Academy](https://www.clubscikidz.com/virtual-steam-academy/)

<https://www.clubscikidz.com/virtual-steam-academy/>

November & December

Along with our virtual instruction, Club Scikidz' lab kit is a comprehensive collection of STEM-based fun science experiments, and projects that will help young scientists and engineers explore the wonders of the world around them. Kids can even build their own "Laboratory" and "Museum" with the real lab equipment and curated specimens they receive each month.

[Craft Academy Girls in Engineering Math & Science Day](https://www.moreheadstate.edu/Academics/Craft-Academy/Girls-in-Engineering,-Math-Science)

<https://www.moreheadstate.edu/Academics/Craft-Academy/Girls-in-Engineering,-Math-Science>

November 14, Grades 4-12

GEMS is a one-day event featuring workshops facilitated by local women in STEM. This event is an opportunity discover, explore and create through various STEM activities. You do not have to be a Girl Scout to attend GEMS.

[Daviss County Public Library Mini Thinkers](http://dcpllibrary.evanced.info/signup)

<http://dcpllibrary.evanced.info/signup>

Monthly, Pre-K

Check out the DCPL Facebook page for a virtual version of our STEM (Science, Technology, Engineering, Math) program for preschoolers. Recommended for ages 3-5. Pick up a kit to do this month's activity while supplies last!

[Girls of STEEL: Think Lab on Facebook Live](https://www.warrenpl.org/events)

[warrenpl.org/events](https://www.warrenpl.org/events)

Second Mondays starting January, Ages 8 – 13

A progressive STEAM lab that empowers girls to explore Science, Technology, Engineering, Art, Math and more! For more information email jordanf@warrenpl.org.

[Invented with Reinvented Magazine Workshop Series](https://www.reinventedmagazine.com/invent-with-reinvented)

<https://www.reinventedmagazine.com/invent-with-reinvented>

CAD and the Mathematics of Engineering: December 6, All Ages

Join us for an interactive night of creativity and opportunities to show off your design thinking! Erika will share a few of her designs, discuss the mathematics behind engineering, and talk about ways to learn more and where you can apply these skills! She will lead you through a variety of fun tutorials in TinkerCAD where you'll have a chance to create your own designs and win prizes! *Creative Director of Reinvented Magazine is a Senior at the Gatton Academy at Western Kentucky University.*

[Jessamine County Library STEM Events](#)

<https://www.jesspublib.org/>

STEM For Kids at Home: First Wednesdays, Grades K–5

What will you discover at the intersection of stories and learning? Join us for an interactive STEM learning experience through the art of digital storytelling.

STEM: Hydroelectricity: November 11, 18 & 29 and Dec. 17, All ages

See how the power of the river is harnessed and transformed into the electricity that powers homes and businesses in this 4-part series.

STEM: Lunar Craters, December 2,3, All ages

Learn about the moon's craters and follow along with Shantel Richardson as you make our own craters.

STEM: Behind the Scenes: LFD Christmas Light Show: December 23, All Ages

Take a behind-the-scenes look at what it takes to make Lexington Fire Department's Station 20 holiday light show come alive! Explore the technology required to run the lights and broadcast music to your car.

[Josephine Sculpture Virtual Night Sky Tours](#)

<https://josephinesculpturepark.org/calendar/>

Monthly, penultimate Saturdays, All Ages

Explore the night sky with expert guidance from Dan Price, NASA Solar System Ambassador. In person tours return in 2021.

[Kentucky Historical Society](#)

<https://history.ky.gov/events/>

A Simple Justice: Kentucky Women Fight for the Vote: December 4

2020 has been a year of commemoration, marking 100 years since the passage of the 19th Amendment to the Constitution, granting women the right to vote. Join via Zoom as Dr. Melanie Beals Goan shares deeper insights into the battle for women's suffrage in the Commonwealth.

Shape History: Claymation Studio: December 21

Get inspiration for your story by virtually touring the different eras in the museum. Then, create a script, build diorama sets, design characters out of modeling clay, and film your short using a stop motion app that can be downloaded on different devices.

[Lexmark E-Week with UKY Engineering](#)

<https://www.engr.uky.edu/eday>

February 21 – 27, 2021

E-Day is now a virtual E-Week! Celebrate all things engineering, from building bridges to discovering new medications to writing the software that powers our cell phones, engineers and computer scientists do the things that make our 21st-century world work.

[Louisville Zoo Live Events](#)

<https://louisvillezoo.org/education/individuals-and-families/>

Monthly November - January

Discover the world without leaving your bed! Virtual Animal Events are a great way for your family to cuddle up and explore everything the Zoo has to offer.

[Newton's Attic Livestream Project Kits](#)

<http://newtonsattic.org/>

On Demand, Grades 7+

Catapult - Livestream Project 1

Learn about the engineering process as mechanical engineer (and Newton's Attic founder) Bill Cloyd guides you through the construction of your own miniature siege machine.

Desktop Skee-ball - Livestream Project 2

Can't get out to play in an arcade? No problem after you build your own desktop skee-ball machine! Watch your machine keep score automatically using only the mechanical design.

Hand Launch Glider - Livestream Project 3

Experiment with different configurations and learn about the physics of flight using the fully movable control surfaces on your glider.

[NKU STEM+H Career Explorer](#)

<https://inside.nku.edu/artsci/centers/cinsam/p12students/p12stemevents/hsstemday.html>

November 9 – December 4, Grade 9-12

Engage in a variety of topics like engineering, forensics, cooking and more! Using Zoom, students will engage in live, online guided lessons and activities with teachers. Parents/guardians will need to provide the materials for their camp of choice in order for the student(s) to participate.

[PSPL Virtual Family Night](#)

<https://www.pspl.org/event/virtual-family-night-jingle-all-the-way-steam/>

December 3, 2020

Families with kids all of ages, experience the holidays through STEAM activities. Registration is required and begins Monday, November 30.

[Science & Engineering Fair of Northern Kentucky](#)

<https://sefnk.stemwizard.com>

February 27, 2021, Grades 4 – 12

The Science and Engineering Fair of Northern Kentucky (SEFNK) is an annual science fair held at Northern Kentucky University. 4th through 12th-grade students from across the region gather to present their science projects and compete for numerous awards.

[TechGirlz Virtual Workshops](#)

<https://www.techgirlz.org/techshopz/category/workshops/>

Unless otherwise noted, workshops are open to girls in 6th-8th grade. All workshops are free. Below is a sample of more than 12 upcoming workshops, to get the monthly Upcoming Events Newsletter, [please sign up here](#).

Introduction to Javascript: November 28

JavaScript is what makes the web move. JavaScript is used to make apps, interactive websites, responsive animations, web games... pretty much whatever you can think up. In this course, you will learn the basic concepts of JavaScript, learn to talk directly to your website, and create your own JavaScript program

Mapping For humanity: Using Digital mapping to Better The World: November 30

In this workshop, students will learn how satellite images, collected by various agencies around the world, can be used to help global humanity. Platforms like OpenStreetMap and the Humanitarian OpenStreetMap Team Tasking Manager offer an opportunity for volunteers, (such as the participants at TechGirlz) who are not necessarily experts in coding or interpreting this information, to contribute to critical missions.

[Tree Week Video Series from The Arboretum](#)

<http://arboretum.ca.uky.edu>

November 10-17, All ages

Tree Week is a celebration of trees and green spaces led by the Urban Forest Initiative (UFI). Throughout the week there will be events both virtual and in person. Please UFI us as we continue to celebrate the trees and greenspaces around us with our friends, neighbors and strangers.

[UKY Virtual Women in Engineering Evening](#)

<https://www.engr.uky.edu/wie-evening>

November 5, Grades 9+

Attend to learn about the process of applying to UK, discover what it takes to be a successful engineering student, meet UK Engineering staff and faculty, and engage with current student leaders in the UK Society of Women Engineers. Parents and guardians will also learn how they can help their students pursue a career in engineering during a special parent/guardian workshop.

[WAVE Foundation at Newport Aquarium](#)

<https://wavefoundation.org/education/>

Aquatic Adventures, On Demand, Grades K-6

Go inside Newport Aquarium to highlight amazing animals with activity guides posted below. Follow the video link to Newport Aquarium's YouTube page to see all the Aquatic Adventures!

Gills Club, December 12, Ages 6-13

Gills Club is an education initiative of the Atlantic White Shark Conservancy and has partnered with WAVE Foundation in a free program series for girls. Connect with community mentors and scientists actively working in STEM-related fields, sharing knowledge and inspiring conservation!

[WKU Center for Gifted Studies Online Camps](#)

<https://www.wku.edu/gifted/>

Super Saturdays: February 6, 13, & 20 and on demand, Grades 1-6

While many Super Saturdays classes change each year, the focus on minds-on, hands-on learning is always present.

IdeaFestival; February 17

Now in our eighth year, IdeaFestival Bowling Green is an annual one-day celebration of ideas and imagination designed to inspire the next generation of creators, thinkers, and innovators.

[Madison Co. Public Libraries STEM Kits](#)

<https://www.madisonlibrary.org/>

Every other Thursdays, Grades K-5

Follow along with a STEM kit from MCPL and enjoy the best of both worlds- a hands-on virtual learning experience. Kits are available for pick up at Berea and Richmond Branches Thursday-Saturday.

[Oldham County Public Library Virtual STEM Saturday](#)

<https://www.oldhampl.org/Events/>

November 21, All ages

Are you curious about science, love doing experiments, and like to learn how things work? Grownups and kids can enjoy science experiments together - join us for our new online program, Science Saturday! Supplies are provided by the library; select which branch you would like to pick your supplies up from when you sign up.

[Camp NTI with Kentucky Science Center](#)

<https://kysciencecenter.org/nti/>

Louisville, Weekly through December 3, Grades K-5, \$245/295 per week

Camp NTI will offer your camper a sense of normalcy by providing structure and socialization all within small group pods and following COVID-19 safety guidelines. Our highly trained staff will support your child's virtual learning assignments during dedicated NTI timeframes each day. Camp NTI will provide an exciting and engaging experience with virtual learning support, enriching activities, demonstrations, and safe exhibit exploration – everything they love about visiting the Science Center!

[Challenger Learning Center of KY STEAM Box](#)

<https://www.clcky.com/steambox>

Ages 6-14, \$35 per box

STEAM Box home kits deliver fun and educational STEAM (Science, Technology, Engineering, Art, and Math) activities right to your door. Including everything you need to complete multiple projects, these boxes will be themed for a wide variety of STEAM-related interests and updated regularly with new activities!

STEM EVENTS FOR PARENTS & EDUCATORS

[Black Girls CODE Computer Science Education Week](https://www.blackgirlscode.com/programsevents.html)

<https://www.blackgirlscode.com/programsevents.html>

Parents Talk Computer Science: December 7, 2020, 3PM EST

Entrepreneur Bukola Somide will join Black Girls CODE for a candid chat about her career as a Black woman in tech and the importance of nurturing a STEM identity at a young age. Bukola is a loving mom, Software Engineer, Project Management Professional, Author, Inventor, and Founder of Innovant Technologies LLC. Bukola is currently best known for inventing the first-ever interactive computer science educational doll. She's also the author of *Somi the Computer Scientist: Princess Can Code* storybook and has created an array of computer science activity books for children.

Computer Science Education Week: December 8-11

Computer Science Week kicks off on December 7th! Black Girls CODE will host a 4-day long introductory computational thinking workshop designed to bridge the gap between those interested in computer science and beginner coders looking for a fun and facilitated coding experience using Python. Students will receive a guided introduction to programming concepts ranging from procedural decomposition, to functions, conditionals and basic data structures. Students will also get the chance to hear from a diverse panel of women in STEM, meet like-minded peers, and learn about careers in the field of computer science during this virtual experience.

[Computer Science Fundamentals Introduction Workshop](https://greatercincsystem.org/events/computer-science-fundamentals-introduction-workshop-virtual/)

<https://greatercincsystem.org/events/computer-science-fundamentals-introduction-workshop-virtual/>

November 12 - 16, K-5 Educators,

STEAM Box home kits deliver fun and educational STEAM (Science, Technology, Engineering, Art, and Math) activities right to your door. Including everything you need to complete multiple projects, these boxes will be themed for a wide variety of STEAM-related interests and updated regularly with new activities!

[KCM Resources for Virtual Math Instruction](https://sites.google.com/view/kcm-virtual-settings/home)

<https://sites.google.com/view/kcm-virtual-settings/home>

On Demand, Free

KCM is offering Free "mini" Virtual PLEs. Navigate opportunities by category, and watch recording of previous mini-sessions.

[LabXchange from Harvard](https://www.labxchange.org)

<https://www.labxchange.org>

On Demand, Students, Parents, and Educators

LabXchange brings together high-quality content from a variety of sources in the form of online learning assets, including videos, assessments, and simulations. Our re-engineered Open edX platform gives users the flexibility to search, select, and insert these assets into their own customized learning pathways.

[Louisville Zoo Resources](https://louisvillezoo.org/education/)

<https://louisvillezoo.org/education/>

Resources for Parents, Free on demand

Check out an amazing array of free content to use with your kids including videos and digital resources!

Conservation and Conversation, \$10 per device

Connect with ecology and wildlife conservation to critically explore a variety of environmental and conservation issues. Each month participants will receive a discussion guide (including book, film, and podcast recommendations!) and access to a live virtual discussion with Zoo educators. We hope to include your whole family in a fascinating conversation on conservation topics each month.

Digital Activities, Free on demand

Load up on free teacher resources, activities, worksheets and more!

Zoo Live Adventures, \$150 for up to 32 participants

Give your group an unforgettable experience with our zoo staff and animals. Each Virtual Animal Adventure includes 2 Live sessions at 30 minutes each, a downloadable "Zoo Detectives" mystery packet, and a pre-recorded virtual walkthrough of the Zoo's Wetlands

[The Living Arts and Science Center Lexington](https://lasclex.org/bring-us-to-you/virtual-field-trips-and-outreach/)

<https://lasclex.org/bring-us-to-you/virtual-field-trips-and-outreach/>

The Living Think, On Demand, Free

LASC has unveiled a new YouTube channel called The Living Think. There you will find free video resources and lesson plans that align with state standards.

Virtual Outreaches, K-12 Educators & Parents, \$

Starting the school year virtually is challenging, but the Living Arts & Science Center is here to help. LASC brings professionally trained artists and experienced educators to your classroom VIRTUALLY or work directly with LASC staff to create and facilitate companion activities to your lessons.

[Math Fact Fluency for Families](http://kcm.nku.edu/mathfactfluency/index.php)

<http://kcm.nku.edu/mathfactfluency/index.php>

On Demand

The Math Fact Fluency site was designed so that teachers, parents & students could easily access tools to help them with math instruction.

[NKY Makerspace Virtual Making](http://www.nkymakerspace.com)

<http://www.nkymakerspace.com>

On Demand, Free

Explore six weeks of STEM activities to do at home! Pick, choose, and complete these activities! Each activity comes with a resource site, video link, tips & tricks, and more!

Did we miss an event? Please submit details here:

<http://kgsc.org/share-a-stem-resource/>