SCRATCH DAY

meet • share • learn

LOGO FOUNDATION

TEACHERS COLLEGE COLUMBIA UNIVERSITY

Teachers College, Columbia University
Broadway at 120th Street
New York City
December 1, 2018

9:00 AM – 9:30 AM	Sign In
9:30 AM – 9:45 AM	Opening Session
	- Greetings
	- Important Information for Scratch Day Attendees
10:00 AM – 11:00 AM	First Session Workshops
11:15 AM – 12:15 PM	Second Session Workshops
12:30 PM – 1:00 PM	Closing Session
	- What's New in Scratch 3.0
	- Raffle

This Scratch Day is a Bring Your Own Device (BYOD) event. Unless otherwise noted in the description for a specific workshop, you will need a Mac, PC, or Chromebook laptop.

Workshops

<u>Double Sessions – 2 hours 15 minutes</u>

Makey Arcade Games
Josh Burker, The School at Columbia University
Join us to create arcade-type Scratch games and an arcade "cabinet" to play them on. We will use a Makey Makey and conductive materials to create custom controllers, decorate our cabinet in which a laptop will fit, and program short, fast-paced Scratch games to play on our custom cabinet.
<u>Audience</u>: Experienced Scratchers in middle school and above. Some experience with Makey Makey is helpful
<u>BYOD</u>: PC, Mac, or Chromebook

Score, Time, and Assets: Learn How to Add These Essential Features to Your Scratch Games
Karioki Crosby, Columbia University/Latimer Heights
We'll start by sharing what our favorite games are and discuss how the players win or lose, and what factors determine their degrees of freedom in the game. You will create a fun game where you collect objects and score before your before time runs out.
<u>Audience</u>: Scratchers Grades 4 and up who have some familiarity with Scratch
<u>BYOD</u>: PC, Mac, or Chromebook

Create a Musical Instrument with Circuit Playground Express
Steve Farnsworth, Avenues
Using MakeCode (a blocks-based program similar to Scratch) and the Adafruit Circuit Playground Express, we will create our own musical instruments and play them. We will take advantage of the many onboard sensors, speaker, and color changing LEDs to design new musical instruments of the future.
<u>Audience</u>: Scratchers 8 years old and up; no prior experience is needed.
<u>BYOD</u>: PC, Mac, or Chromebook

<u>One-Hour Sessions</u>

Get Funky with Funkey, Scratch, and Cardboard musical instruments
Karen Blumberg and Gabrielle Ross, The Brearley School
The Funkey board is a microcontroller – just like MakeyMakey – that allows you to use every-day objects and materials such as aluminum foil, playdough, and bananas to interact with your Scratch projects. We'll construct cardboard shapes, add conductive elements, connect them to a Funkey board, and program different instruments, sounds, and notes using Scratch to play music and form a band!
<u>Audience</u>: People of all ages; no prior Scratch experience is needed.
<u>BYOD</u>: PC, Mac, or Chromebook

Physical and Virtual Innovation - Scratch 3.0 and the BBC micro:bit
Trevor Shaw, Dwight-Englewood School
Use the BBC micro:bit and the new micro:bit blocks in Scratch 3.0 to create physical inventions that interact with your Scratch program. Build game controllers, sensors, robots, and anything you can imagine.
<u>Audience</u>: People of all ages; no prior Scratch experience needed
<u>BYOD</u>: Mac with OSX 10.13 or higher or PC with Windows 10. Also please download Scratch Link from https://scratch.mit.edu/microbit and install it on your laptop before you attend the workshop.

Getting Started with Scratch
Monica Chan, Teachers College, Columbia University
Getting Started with Scratch is your crash course in all things Scratch. If you aren't sure what Scratch is and want to get started with programming your own interactive games and art, this workshop is for you! Come learn more about this coding program that enables you to create and share your own interactive art, games, and animated stories! You will have an opportunity to explore Scratch while learning about how to complete your own creative projects.
Audience: best for Scratchers in grades 3-5 but all are welcome; no prior Scratch experience needed
BYOD: PC, Mac, or Chromebook

Introduction to Scratch Jr.
Anderson Harp, Sean Botti, Ali Hamdard, Andersen Hagfors, Jensen Hagfors, & Max Schmidt,
The Browning School
Learn the basics of computer science, engineering, and design together with Scratch Jr. a version of Scratch designed for young learners. This workshop is an introduction to coding through storytelling and animations using the Scratch Jr. app. Parents and children will learn the basics from Browning's lower and middle school students in this hands-on workshop geared for beginners. You will leave with the knowledge and tools to create and make stories come alive with Scratch Jr.
Audience: children ages 5 to 8 and their parents; no prior experience needed
BYOD: iPad, Android tablet, or Chromebook

Beyond the Keyboard - Control Your Scratch 3.0 Game with Body Movements!
Tracy Rudzitis, The Marymount School of New York
Using Scratch 3.0 and the Micro:bit we will design and construct custom game controllers that involve more than just hands and fingers. Can you imagine playing a game with just your feet? With a team of players? Where you use your entire body movement to play the game on the screen? Bring your imagination and your enthusiasm for game playing and we will use cardboard, foil, wires, craft materials, to build large-scale game controllers to play Scratch games.
Audience: people of all ages; some familiarity with Scratch is needed
BYOD: Windows 10+, macOS 10.13+, Bluetooth 4.0
Please download Scratch Link from https://scratch.mit.edu/microbit and install it on your laptop before you attend the workshop.
Slide presentation for this workshop: http://bit.ly/Scratch2018-microbit

Toy Tinkering with micro:bit and Scratch 3.0
Judith Seidel, Micaela Hourihan, Sylvie Plouffe, Zora Penn, Horatio Wilcox, Channing Bunche, Julian Vink, Emmet Smith, Hunter Earle, Henry Tassone, and Stephen Sulimani, Friends Seminary
We will program a micro:bit with Scratch 3.0. Then we will place that micro:bit inside of or on top of toys. When those toys are shaken or tilted something surprising will happen in Scratch 3.0. You can bring your own small stuffed toy or doll or use one of toys we'll have at the session. Just make sure the stuffed toy or doll you bring is one you don't mind tinkering with.
Audience: Scratchers 7 to 10 years old who have some familiarity with Scratch
BYOD: Mac with OSX 10.13 or higher or PC with Windows 10. Also please download Scratch Link from https://scratch.mit.edu/microbit and install it on your laptop before you attend the workshop.

Creative Coding with BrainPOP + Scratch
Allisyn Levy, BrainPOP
"Showing what you know" used to involve just posters, dioramas, and slideshows. We will put a whole new spin on that concept by coding projects. Come create a coding project on BrainPOP whether you're a first time coder or have lots of experience. We'll use BrainPOP's new Creative Coding platform based on Scratch to create a digital museum, sorting game, or story using Moby and other BrainPOP characters.
Audience: People of all ages; no prior Scratch experience needed
BYOD: laptop, Chromebook, iPad or Android tablet
Projects used in this workshop: https://bpopne.ws/hoc

1 on 1 Scratch by Kids for Kids
Francesca Zammarano and Junior School tech leaders United Nations International School
Do you want to explore Scratch and would prefer to have a fellow student show you rather than an adult? Explore Scratch together with students from UNIS; one on one tutoring by kids for kids. Come with your ideas for a project you've been wanting to create or a project you are working on that you need help with. We'll also offer suggestions for projects you might want to pursue.
Audience: Scratchers in grades 3 and up; no prior Scratch experience needed
BYOD: PC, Mac, or Chromebook

Machine Learning with Scratch - Make Your Own Digital Assistant!
Jaymes Dec, The Marymount School of New York
In this workshop, you will create a digital smart assistant in Scratch that can decipher written commands for controlling a virtual lamp and a fan. You will learn how artificially intelligent computer systems, like Siri and Alexa, are trained to understand the content in natural language commands.
Audience: Scratchers ages 11 and up having some familiarity with Scratch
BYOD: PC, Mac, or Chromebook
Slide presentation for this workshop: http://bit.ly/2Q9Dc3N

Video Sensing with Scratch 3.0
Carmelo Presicce, Kreg Hanning, Carolina Rodeghiero, Shruti Dhariwal, and Jaleesa Trapp, MIT Media Lab/LLK Scratch Team
Did you know that Scratch can "see" objects moving in front of the camera? In this workshop you will use Video Sensing blocks in Scratch 3.0 to make animations, video games, or musical instruments that interact with physical objects — such as toys, craft materials, and your body!

Audience: People of all ages, no prior Scratch experience needed
BYOD: Mac, PC, Chromebook, iPad, or Android tablet

Create Animations That Talk
Carmelo Presicce, Kreg Hanning, Carolina Rodeghiero, Shruti Dhariwal, and Jaleesa Trapp, MIT Media Lab/LLK Scratch Team
Bring your characters to life in Scratch 3.0 using new Text-to-Speech blocks. You can also make your characters speak in different languages and with different voices! Create a rapping robot or an interactive animation that talks. This workshop will show you how to create talking animations that spin, zoom and change colors. The possibilities are endless!

Audience: People of all ages, no prior Scratch experience needed
BYOD: Mac, PC, Chromebook, iPad, or Android tablet

Musical Makey-Makey Scratch Projects: Making the Most of Remixes
Jill Work, Stuart Country Day School
We'll start by looking at Scratch projects with a musical theme that use Makey-Makey. Then you will remix these projects to personalize them, remix music projects that do not use Makey Makey to add that feature, or start from Scratch to create your own Makey Makey Music project. You will have the opportunity to generate musical through Makey-Makey and Scratch with a variety of input media: Play-Dough, gummi worms, hand-clapping, aluminum foil, and more.
Audience: Students from third grade up will be the best fit; but all are welcome. Little or no Scratch experience is required.
BYOD: PC, Mac, or Chromebook

Closing Session

What's New in Scratch 3.0

Carmelo Presicce, Kreg Hanning, Carolina Rodeghiero, Shruti Dhariwal, and Jaleesa Trapp, MIT Media Lab/LLK Scratch Team

On January 2nd, a new generation of Scratch, called Scratch 3.0, will be officially released. This new version will include a brand-new editor with new characters, backgrounds, and sounds, new extensions, new support materials — and it runs on a wider variety of devices, including tablets! Members of the Scratch Team will give a quick demo highlighting some of the new features, and answer your questions about Scratch 3.0.

Raffle

At the end of Scratch Day, we will raffle off some cool prizes that have been donated by our sponsors:

- Two Makey Makey Kits
- Two Funkey Kits
- Certificates for workshops at Dazzling Discoveries and RoboFun

You must be there in person to win!