SCRATCH DAY

December 13, 2015
9:00 AM – 1:00 PM

The Town School
540 East 76th Street
New York City

LOGO FOUNDATION

9:00 AM – 9:30 AM	**Registration**
9:30 AM – 9:45 AM	**Opening Ceremony**
9:45 AM – Noon	**Workshops**
12:15 PM – 1:00 PM	**Closing Ceremony: Project Sharing and Raffle**

Workshop Descriptions

There are one-hour workshops and double sessions, which are two hours, fifteen minutes.

Double Sessions – 9:45 AM – Noon

Move Over XBox, Make Room for the Hummingbird Game Controller
Hope Chafiian, The Spence School

Learn how to use the Hummingbird microcontroller as a game controller. Let the physical world change the digital world on your screen. Learn how to program the light sensor, knob control, sound sensor, and distance sensor to control aspects of your Scratch game. Make your sprite grow larger, move faster, disappear, and so much more.

Suitable for experienced Scratchers age 10 and up. Before Scratch Day, please go to http://finch-robots.readthedocs.org/en/latest/scratch/setup.html and follow instructions to download and install the BirdBrain Robot Server and the Scratch 2.0 Offline Editor on your laptop.

Cardboard Jam Band with MakeyMakey and Scratch
Karen Blumberg, The School at Columbia

Makey Makey is an invention kit that allows you to use every-day objects and materials, such as aluminum foil, play dough and bananas, to interact with your Scratch projects. Let's construct cardboard shapes, add conductive elements, connect them to MakeyMakey, and program different instruments, sounds, and notes using Scratch to play music and form a band!

Suitable for people of all ages; no prior Scratch experience is needed

Make!Sense - Plug and Play with Sensors
Stephen Lewis, Architectronics

Make!Sense offers a great way to invent physical interfaces for Scratch programs, and also to use sensors with Scratch in science experiments. Measue the speed of your toy car, or the soil moisture of your plants. Learn to make cool inventions out of simple materials using really interesting and fun sensors. Then control your games in unusual ways: Make the Scratch cat jump in time to your heart beat. Create a steering wheel for a race car game. Make your character dance by waving your hands. And much more…

Suitable for experienced Scratchers age 10 and up

Use Scratch for Arduino to Create Weird Musical Instruments
Steve Farnsworth, The Dwight School

Use Scratch to program the Arduino microcontroller to create your own uniquely weird musical instrument that can be controlled by using different kinds of sensors. Explore the world of building circuits with electronic components, wires, the Arduino and a breadboard.

Best for older Scratchers, age 12 and up; no prior Scratch experience is needed.
Before Scratch Day please go to http://s4a.cat/ to download and install Scratch for Arduino on your laptop.

Making Games in Scratch
Rosanna Sobota, The Coding Space
Danielle Horn, The Coding Space

Do you like to play video games? If you do, then you'll love making them! With no prior coding experience necessary, this introductory course will teach you the basics of how to think like a programmer through making a game you can play with your friends.

Suitable for people of all ages; no prior Scratch experience is needed

Scratch 3D – A Full 3D World for Scratch
John Goodwin, Architectronics

Scratch3D is a 3D world-building extension that empowers you to create and think in three dimensions, with natural and realistic lighting, perspective, object creation, and physics that simulate real life. Scratch3D is an engaging and exciting way to explore the magic of creating games and stories using simulated 3D space and 3D geometries.

Suitable for experienced Scratchers age 10 and up

One-hour Sessions – 9:45 AM – 10:45 AM and/or 11:00 AM – Noon

Make it from Scratch Jr.
Julianne Ross-Kleinmann, The Foote School

Are you at the beginning stages of coding? Would you like to learn how to code (or teach it to your students)? Are you familiar with Scratch? This workshop is an introduction to coding using Scratch Jr. Learn how to create your own interactive stories and games. This is a great way for parents and teachers to introduce their children to coding and Scratch.

For younger Scratchers ages 5 to 7, their parents, and teachers; no prior experience is needed. Before Scratch Day please download and install Scratch Jr for iPad from the Apple Store or for and Android tablet from Google Play

Game Creation with Finch Robots
Daniel Taylor, Mount Hebron Middle School
Abel Yemane, Mount Hebron Middle School
Dash Foley-Wilkins, Mount Hebron Middle School
Noah Patnaude, Mount Hebron Middle School

Come learn how these easy-to-program robots generate excitement around learning! Mount Hebron Middle School has been working with Finch robots for over two years. Our students have spent time teaching elementary-aged students and adults, including educators. Now, they are designing robot-based board games for recreational use by our student population. Join us to PLAY GAMES, possibly design a game board and see how this robot employs the students as designers of curriculum that emphasizes both project-based and problem-based learning.

Suitable for people of all ages; no prior Scratch experience is needed.
Before Scratch Day, please go to
http://finch-robots.readthedocs.org/en/latest/scratch/setup.html
and follow instructions to download and install the BirdBrain Robot Server on your laptop.

Scratch Animations with MaKey MaKey Controllers
Erik Nauman, The Hewitt School
Sara Namoos, The Hewitt School
Ariana Sokhi, The Hewitt School
Jeremy Sambuca, The Hewitt School
Young Kim, The Hewitt School

Sixth grade students at The Hewitt School would like to show you how you can make animations in Scratch and control them with a MaKey MaKey controller. Our animations are about using computers responsibly but you could make one about anything you want!

For people of all ages, no prior Scratch experience is needed

Introduction to Turtle Art
Sean Justice, Teachers College, Columbia University

Turtle Art is a computational painting application that uses visual blocks, like Scratch. This workshop introduces Turtle Art through a playful exploration of color and shape. With Turtle Art, drawing and painting become visual experiments with geometry and pattern at the intersection of art and computer programming.

For people of all ages; no prior experience is needed, but children younger than about 8 years old might require adult assistance.

Before Scratch Day go to http://turtleart.org. Click "email us" to request a copy of the software, which you should download and install on your laptop.

Scratch Jr - Welcome to Coding!
Jennifer Lau, Greenwich Public Schools

Create stories and/or games using this very friendly, intuitive intro to Scratch. Create a story about your pet! Make a race between a Bear and a dog! Explore a spoooky nighttime forest. We will start with some easy instructions and templates so you and your child will be off and running quickly.

For younger Scratchers ages 5 to 7, their parents, and teachers; no prior experience is needed. Before Scratch Day please download and install Scratch Jr for iPad from the Apple Store or for and Android tablet from Google Play.

Making Extensions for Scratch
Gregory Wickham, Independent Programmer

This session will teach you how to make extensions for Scratch by using JavaScript. You will be able to control the appearance and other aspects of a web page. You will also be able to create new blocks that increase the mathematical power of Scratch or add other features. Examples of possible Scratch extensions include an International Space Station Tracker and a Text to Speech synthesizer. Led by a self-taught twelve-year-old programmer.

For experienced Scratchers who also know some JavaScript

Programming Interactive Games in Scratch Jr.
Alana Zussman, The Dwight School
Matthew Moran, The Dwight School

This hands-on workshop will introduce young programmers to key elements of game design in Scratch Jr. You will explore visual block coding and learn to creatively communicate a story through multi-layered levels.

For younger Scratchers ages 5 to 7, their parents and teachers; no prior experience is needed. Before Scratch Day please download and install Scratch Jr for iPad from the Apple Store or for and Android tablet from Google Play.