How to Run an ‘Hour of Code’

Stefana Muller
Founder, LI Women in Tech
Long Island Women in Tech

Working to increase the number of women in technology roles on Long Island.

Stefana Muller
Founder & Organizer

LaShana Breland
Director & Social Media Guru

Samantha Seymour
Director

Kerry Harrison
Director
What We Do...

Networking
Network with over 250 members from across Long Island and make the right contacts to help propel your career.

Career Support
Get resume help, guidance on building your social brand, leadership tips and more. Members from a variety of backgrounds are available to help you define your career and take it to the next level.

Mentoring
Find a mentor, sign up to be a mentor or ask the group for key advice along the way.

Community Engagement
Give back to our local community by volunteering in local schools, libraries and other community programs to help build tech interest on Long Island.

Education
Join monthly local and online training meet ups to keep ahead of the curve on the latest technology and your career.

Safe Space
We foster a safe space for you to try something new, test out your ideas, share your concerns and get advice. This is a no judgement zone.
Agenda

- Learn the Basics
- Schedule Sessions
- Session Prep
- Host the Session
- Follow Up
Learn the Basics

What is coding?

What is Hour of Code?

Why should people learn coding?

What types of people code?

What courses should I take to be prepared?
What is coding?

Coding is what makes it possible for us to create computer software, apps and websites. Your browser, your OS, the apps on your phone, Facebook, and all websites – they’re all made with code.

What is Hour of Code?

The Hour of Code™ is a global movement started by nonprofit Code.org and reaching tens of millions of young people in over 180 countries. The Hour of Code is designed to demystify code and encourage everybody to learn the basics. Minecraft is excited to team up with Code.org and Microsoft Philanthropies to provide young people an opportunity to learn the basics of coding with a brand they know and love.
Basics: Why Coding?

“I think everybody in this country should learn how to program a computer because it teaches you how to think.”

-Steve Jobs
Basics: Why Coding?

Coding is a crucial life skill that supports children’s intellectual and creative development. It is a fundamental skill alongside math and reading.

Coding:

■ drives innovation
■ allows kids to be creative
■ builds confidence
■ is best learned early
■ translates to success in other areas
### Basics: Who Codes?

- **Programmers**
- **Developers**
- **Hackers**
- **Computer Scientists**
- **Software Engineers**

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<tr>
<th>Programmers</th>
<th>Developers</th>
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<td>Computer Engineer</td>
<td>Security Engineer</td>
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<td>Network Architect</td>
<td>Software Design</td>
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<td>Programmer</td>
<td>User Experience Designer</td>
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<td>Research Scientist</td>
<td>Quality Analyst</td>
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<td>Hardware Engineer</td>
<td>Test Environment Manager</td>
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<td>Software Engineer</td>
<td>Graphic Designer</td>
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<td>Project Manager</td>
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<td>Product Manager</td>
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<td>Technical Writer</td>
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<td>Agile Practitioner</td>
<td>Animator</td>
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<td>Product Owner</td>
<td>Art director</td>
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<td>Database Administrator</td>
<td>Business Relationship Mgr.</td>
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<td>Web Developer</td>
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<td>Solutions Architect</td>
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<td>IT Manager</td>
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<td>Systems Administrator</td>
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<td>Business Analyst</td>
<td>Content Writer</td>
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<td>Data Scientist</td>
<td>Social Media Specialist</td>
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<td>Network Analyst</td>
<td>Information Security Analyst</td>
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<tr>
<td>Architect</td>
<td>Information Systems Manager</td>
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<tr>
<td>Recruiter</td>
<td>Software Tester</td>
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<tr>
<td>Site Reliability Engineer</td>
<td>Educator</td>
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**Note:** This list is not exhaustive and may vary depending on the context and industry.
Basics: How do I learn to do this?

Take the course yourself and choose one

Minecraft - https://code.org/minecraft

Starwars - https://code.org/starwars

Get some background knowledge

https://studio.code.org/courses?view=teacher
Basics: How do I learn to do this?

Take the course yourself and choose one (1 hour)

Minecraft - https://code.org/minecraft

Starwars - https://code.org/starwars

Get some background knowledge (1 hour)

https://studio.code.org/courses?view=teacher
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Schedule Sessions

1. Sign up as an educator on Code.org
   
   https://code.org/volunteer

2. Send letters & emails to local schools or organizations (girl/boy scouts, local library, computer stores, community centers, etc.)
   
   https://code.org/help

3. Promote your hour of code
   
   https://hourofcode.com/us/promote/resources
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Session Prep: Agenda

Agenda:
During this 1-hour session, your instructor will guide the class through the following activities:

- 2 minute introduction to coding to answer the “what” and “why”
- 5 minute introduction video and talk through some of the basics of the coding language and application we’re using
- 40 minutes of coding, students will work on their own or in pairs to complete levels 1 - 16 of the coding course. Students do not have to finish the course to be successful.
- 10 minutes of wrap up - certificates handed out and student exit tickets filled in and collected
Session Prep: Pre-Work

Pre-Work:
Teachers must print student certificates prior to the course. My recommendation is to print blank certificates and we will write in the student's name when they finish the full hour. https://code.org/certificates

Teachers should print exit tickets for each student so that they can reflect on what they learned
https://docs.google.com/a/code.org/document/d/1yIllo7Pppk6W3Jt58VHS5mjvnshg9URvj3iCU0Ok6qY/edit?usp=sharing

There is no student pre-work required. Students can learn more about Hour of Code by visiting code.org.
Site Requirements:

- Internet connected computers and or tablets with audio are required for this session.
- Headphones are preferred as the program provides both visual and audio feedback throughout the course.
- Smartboard or Projector requested to share video and basic overview with students.
- Ratio of 10:1 preferred to give the students the best experience with coding. The instructor requests there be at least 1-2 teachers present to assist and direct questions during the session.
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Host the Session

- Show an intro video
- Explain the What/Why/How of Coding
- Direct students to the activity
  - Write the tutorial link on a whiteboard.
- Assist when students come across difficulties
  - “I don’t know. Let’s figure this out together.”
  - “Technology doesn’t always work out the way we want.”
  - “Learning to program is like learning a new language; you won’t be fluent right away.”
  - Pause the class and ask everyone to do one lesson together.
  - Have students who finished a board, help the student next to them.
- What if a student finishes early?
  - Students can see all tutorials and try another Hour of Code activity.
  - Or, ask students who finish early to help classmates who are having trouble with the activity.
- Hand out Certificates and a Take Home Info Sheet
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Follow Up

Share resources with the teacher or organizer to continue the education beyond your visit.

Share hand-outs for parents or administrators

Promote what you did!

Blog, Social Media Post, Pictures, Video, Update to your LinkedIn profile, Ask for a letter confirming your activity, etc.

Rinse and Repeat
Follow Up

All the resources from this session are here:

http://liwomenintech.com/hour-of-code/

Reach out to us:

Long Island Women in Tech

http://liwomenintech.com
liwomenintech@gmail.com

@liwomenintech
facebook.com/LIWomenInTech
linkedin.com/groups/8311235
@liwomenintech
Preschool

- Code-a-Pillar: Fisher-Price toy teaches sequencing
- Board Games: Robot Turtles, Qwirkle, Bits &Bytes, littlecodr, Giggle Chips
- Mobile Apps: Tinybop’s The Everything Machine
Elementary School

Block Based Coding with…

- Scratch Jr. – free coding programs for ages 5 – 7
  - English and Spanish plus Tablet versions
  - [https://www.scratchjr.org/](https://www.scratchjr.org/)

- Scratch – free coding programs for ages 8 - 16
  - [https://scratch.mit.edu/](https://scratch.mit.edu/)

- Tynker – free and paid programs for ages 7 – 14
  - “Turn Minecraft time into coding time” plus Parent modules for tracking progress
  - [http://tynker.com](http://tynker.com)

- Hour of Code – 1 hour of coding is all it takes. Ages 4 – 104.
  - [http://code.org](http://code.org)

- Code Combat – play a real game and learn on the way. Ages 9 and up.
  - [https://codecombat.com/](https://codecombat.com/)
Middle School and High School

- Code Studio – Courses for students ages 4 – 18. [http://studio.code.org](http://studio.code.org)

- Scratch – free coding programs for ages 8 - 16
  - [https://scratch.mit.edu/](https://scratch.mit.edu/)

- App Inventor – MIT and Google Labs platform to create mobile apps

- Alice – The Alice Project teaches you to create 3D animations


- MakeSchool – Build your own iPhone app. Ages 13 or older only. [https://www.makeschool.com/build-an-iphone-game-in-your-browser](https://www.makeschool.com/build-an-iphone-game-in-your-browser)