Digital Girl, Inc.

Inspiring an Interest in STEM

After School Enrichment Program
ASEP

Brooklyn, NY

www.digitalgirlinc.org

347.857.8647

Digital Girl, Inc.

A STEM PROGRAM. ENRICHING GIRLS FROM THE ROOT.

HOUR OF CODE

DESCRIPTION

The Hour of Code is a one-hour introduction to computer science, designed to demystify code and show that anybody can learn the basics. *Every* student should have the opportunity to learn computer science. It helps nurture problem-solving skills, logic and creativity. By starting early, students will have a foundation for success in any 21st-century career path.

PROCESS

Digital Girl, Inc. will provide instruction to up to 4 classes per day, with a maximum class level of 30 students. If the school does not posses a computer lab, we have the ability to formulate and teach the class using hand held devices.

PARTICIPANTS

We have options for every age and experience level, from kindergarten and up.

FACILITATORS

Digital Girl, Inc. will provide 2 instructors, and a minimum of 2 class aides (dependent upon class sizes), for each class taught for the day.

FOLLOW-UP

Students will be given specific instructions on how they may continue with the courses post the Hour of Code event.

2019 K-8 Course List

Introduction to Programming
Programming is one of the creative processes that can transform ideas into reality. The intention of this unit is to highlight what can be created by using programming as a tool. In this unit students will create projects that reflect the diversity of interests in the classroom and that are personal to individual students.

Raspberry Pi Projects (grades 6-8)
Raspberry Pi is the perfect platform for novice programmers. The Raspbian OS even has built-in programs pre-installed to make getting involved with coding as easy as possible. One of the best projects for dipping your toes in the waters of programming is creating your own game - it's quick, straightforward, and at the end of it, you'll have a functional result that you can show off to friends and family.

Web Design (grades 6-8)
The basics of html and css are introduced as a method for describing features of web pages that students can use to design and develop web pages based on their own culture, interests and unique experiences.

Robotics
Robotics provides a physical application of the programming and problem solving skills acquired in the previous units. The LEGO® Mindstorms NXT software uses drag and drop programming which will provide a natural transition from Scratch. Robots are shared by several students which will emphasize the collaborative nature of computing. In order to design, build and improve their robots, students will need to apply effective team practices and understand the different roles that are important for success.

Introduction to Computer Science (grades 6-8)
This course will introduce the concept of Computer Science and explain what a Computer Scientist does. It will also give students an opportunity to assume the role of a computer scientist. Students will:
• Learn the difference between programming, computer science, and computational thinking
• Understand that a computer is a tool and not an excuse to turn off your brain
• Learn to be responsible computer users
• Discover that computer science can change the world

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2019 High School Course List

Introduction to Programming
Programming is one of the creative processes that can transform ideas into reality. The intention of this unit is to highlight what can be created by using programming as a tool. In this unit students will create projects that reflect the diversity of interests in the classroom and that are personal to individual students.

Web Design
The basics of html and css are introduced as a method for describing features of web pages that students can use to design and develop web pages based on their own culture, interests and unique experiences.

Robotics
Robotics provides a physical application of the programming and problem solving skills acquired in the previous units. The LEGO® Mindstorms NXT software uses drag and drop programming which will provide a natural transition from Scratch. Robots are shared by several students which will emphasize the collaborative nature of computing. In order to design, build and improve their robots, students will need to apply effective team practices and understand the different roles that are important for success.

Computing and Data Analysis
This unit has been designed to allow students the opportunity to experience the process of data collection and analysis in real-world contexts. The ability to analyze, visualize and draw conclusions from large data sets is critical to computing.

Digital Me!
Students will explore issues of social responsibility in web use and how digital footprints create virtual impressions to the public. In addition, we will have them think about their professional "alter-ego" and ask them to create a website that will reflect their intended career plan that can help them get accepted to colleges and gain employment. Students learn to create user-friendly websites & take the role of a developer using a variety of techniques while expanding their knowledge of algorithms, abstraction and web page design. They will learn to plan and code their pages using a variety of techniques and check their sites for usability.