

# **Beginning Computer Programming**

2011-2012 School Year, Webworks

Full Year Course

9th – 12th grade

One High School Elective Credit

## **Course Tutor:**

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## **Course Description:**

This course provides a gentle introduction to the basics of programming using the LOGO language in a tool called MicroWorlds EX. In LOGO, the programmer has two windows open, one with the code and the other with the graphics and movement being generated by the code. We go step by step through building each program. Throughout the year, we will program geometric patterns, animations, and games.

We will also spend at least one quarter on learning HTML and website building. A basic understanding of HTML will help those who want to program for the Internet in the future. Students will build a four-page website from scratch, while learning about legal (copyright) and safety issues on the Internet. In one class session, you will get a basic history of the Internet and the opportunity to build a model of the Internet to help you understand how it operates.

Students finish the class with a foundation to move into either programming or web development.

## **Course Prerequisites:**

Keyboarding. The ability to type without “hunting and pecking” is a must due to the interactive nature during class. (The average typing speed is about 35 WPM. You can use a typing program like Mavis Beacon Teaches Typing over the summer to work on typing speed and accuracy.)

## **Required Texts:**

None.

## **Required Supplies:**

Microworlds EX: [www.microworlds.com/solutions/mwex.html](http://www.microworlds.com/solutions/mwex.html)

Students will need to purchase, download, and install this software prior to the first class. Group discount is available if purchased on one order form for the whole class through a homeschool vendor. Must enroll by mid-July to get this software discount.

## **Tutor Bio:**

I love technology and I love teaching, so computer classes are some of my favorites to teach. I majored in Computer Science when I first started college. Although I changed my major (several times!) and have a Literary Studies degree, I worked for eight years in the computer services industry doing everything from research and development, to data modeling, to website design, to documentation and training. I have taught computer science classes for homeschoolers for three years, as well as reading and spelling classes for struggling learners. I currently manage several websites. I look forward to giving our homeschooled students the opportunity to learn programming and web design basics.