**Computer Science Discoveries – 7th Grade**

**Julie Brown –** juliebrown@wcps.org

**Syllabus**

Lesson: Web Development

In Unit 2, you’ll learn how to create and share the content on your own web pages. After deciding what content you want to share with the world, you’ll learn how to structure and style your pages using HTML and CSS. You’ll also practice valuable programming skills such as debugging and commenting. By the end of the unit, you’ll have a personal website that you can publish to the Internet.

Lesson: Animations and Games

In Unit 3, you’ll build on your coding experience as you program animations, interactive art, and games in Game Lab. The unit starts off with simple shapes and builds up to more sophisticated sprite-based games, using the same programming concepts and the design process computer scientists use daily. In the final project, you’ll develop a personalized, interactive program.

Lesson: Physical Computing

Unit 6 explores the role of hardware platforms in computing and how different sensors can provide more effective input and output than the traditional keyboard, mouse, and monitor. Using App Lab and Adafruit’s Circuit Playground, you’ll develop programs that utilize the same hardware inputs and outputs that you see in the smart devices, looking at how a simple rough prototype can lead to a finished product. The unit concludes with a design challenge to use the Circuit Playground as the basis for an innovation of your own design.