Cocalico School District
Year-at-a-Glance – Curriculum Overview

Department: Math **Course: Computer Programming (404)** **Grade Level: 9 - 12**

Big Ideas

- Students learn to use the Java programming language to create games and simulations.
- Students learn about the Greenfoot programming environment and how to use it effectively.
- Students learn how to brainstorm, design, and fully program a game or simulation of their own.

Units of Study	% of Course Time	Textbooks & Supplemental Materials	Assessments	Standards Addressed
• Greenfoot basics	10%	• Introduction to Programming with Greenfoot • www.greenfoot.org • Kahoot	• Greenfoot Project #1 • Keyword Quiz #1 • Java Term Quiz #1	• 15.3.12 E, F, I, J • 15.4.12 A-M
• Classes and Methods	15%	• Introduction to Programming with Greenfoot • www.greenfoot.org • Kahoot	• Greenfoot Project #1 • Greenfoot Project #2 • Keyword Quiz #2 • Java Term Quiz #2 • Programming article #1	• 15.3.12 E, F, I, V, W, X • 15.5 B
• Java Syntax and Graphics	25%	• Introduction to Programming with Greenfoot • www.greenfoot.org • Kahoot • PowerPoint	• Greenfoot Project #4 • Greenfoot Project #5 • Keyword Quiz #3 • Java Term Quiz #3 • Programming article #2	• 15.3.12 E, F, I, J • 15.4.12 A-M • 15.5 B
• Inheritance and Debugging	15%	• Introduction to Programming with Greenfoot • www.greenfoot.org • Kahoot	• Greenfoot Project #6 • Greenfoot Project #7 • Keyword Quiz #4 • Java Term Quiz #4 • Programming article #3	• 15.3.12 O, T, U, W, X • 15.4.12 A-M
• Using Documentation and Control Structures	10%	• Introduction to Programming with Greenfoot • www.greenfoot.org • Kahoot	• Greenfoot Project #8 • Keyword Quiz #5 • Java Term Quiz #5	• 15.4.12 A-M
• Animations, Variables and Arrays	25%	• Introduction to Programming with Greenfoot • www.greenfoot.org • Kahoot • PowerPoint	• Final Greenfoot Project	• 15.3.12 E, F, I, V, W, X • 15.4.12 A-M • 15.5 B

Eagle P.A.C.T. Course Connections:

Computer Programming provides students constant opportunities to express their creativity using Java source code. Computer Programming encourages students to collaborate, problem solve and debug programs to make them functional and creative. Sharing of programs among peers with the goal of adapting and advancing the code to perform more complex functions is encouraged throughout the learning process.