West Deptford Middle School Curriculum Map
Creative Computing - Grade 5

Unit/ Duration	Essential Questions	Content	Skills	Assessment	Standards
Unit 1: Introduction To Turtle Art 6 Sessions	• How can an algorithm be used to solve a problem? • Why is it important to be clear and concise when describing a process?	• The commands used in Turtle Art. • The definition of coordinate grid, coordinate pair, and rotation. • The definitions of the iteration, algorithm, program, and programming language. • The geometric properties of a rectangle, square, pentagon, hexagon, octagon, and circle.	• Create a polygon using the Turtle Art interface. • Develop an algorithm to complete a task, both kinetically and using Turtle Art. • Manipulate the Turtle Art interface artistically. • Navigate the coordinate plane.	• Kinesthetic Turtle Art • Coordinate Grid Game • Polygons • Addition vs. Multiplication • Classwork • Homework • Performance Task • Quiz	**Common Core State Standards (CCSS)** • **MA.5.CCSS.Math.Content.5.OA.B.3** • **MA.5.CCSS.Math.Content.5.MD.A.1** • **MA.5.CCSS.Math.Content.5.G.A.1** • **MA.5.CCSS.Math.Content.5.G.A.2** • **MA.5.CCSS.Math.Content.5.G.B.3** **Computer Science Teachers Association (CSTA)** • **L1.6:CPP.5. Construct a program as a set of step-by-step instructions to be acted out.** • **L1.6:CPP.6. Implement problem solutions using a block-based visual programming language.** • **L1.6:CT.1. Understand and use the basic steps in algorithmic problem-solving (e.g., problem statement and exploration, examination of sample instances, design, implementation, and testing).** • **L1:6CT.2. Develop a simple understanding of an algorithm using**

					computer free exercises.

Unit/ Duration	Essential Questions	Content	Skills	Assessment	Standards
Unit 2: Application of Turtle Art 10 Sessions	• What should you look for in a well-written program?	• The commands used in Turtle Art, especially the difference between the repeat and forever commands. • The definitions of fraction, subroutine, troubleshoot, compile, and execute.	• Adjust a written algorithm to change just one aspect of the resulting image. • Create a visual representation of a fraction and explain how to adjust their code to create a different fraction. • Create subroutines and use them in a program. (The "My Blocks" command.) • Troubleshoot an ineffective	• Creating a Visual Fraction Model • Changing a Working Program • Troubleshooting a Program • Creating an Image • Classwork • Homework • Performance Task • Quiz	**Common Core State Standards (CCSS)** • **MA.5.CCSS.Math .Content.5.OA.A. 1** • **MA.5.CCSS.Math .Content.5.NF.B. 3** • **MA.5.CCSS.Math .Content.5.NF.B. 5a** • **MA.5.CCSS.Math .Content.5.NF.B. 5b** • **MA.5.CCSS.Math .Content.5.NF.B. 6** • **MA.5.CCSS.Math .Content.5.G.A.1** **Computer Science Teachers Association (CSTA)** • **L1.6:CPP.5. Construct a program as a set of step-by-step instructions to be acted out.** • **L1.6:CPP.6. Implement**

			program using their knowledge of Turtle Art.		**problem solutions using a block-based visual programming language.** • **L1.6:CT.1. Understand and use the basic steps in algorithmic problem-solving (e.g., problem statement and exploration, examination of sample instances, design, implementation, and testing).** • **L1:6CT.2. Develop a simple understanding of an algorithm using computer free exercises.**