

**Warren Township Public School District
Curriculum**

Subject: Computer Science	Grade: 1	Unit: Computer Coding
Total Number of Lessons: 7	Unit Time Frame: Marking Period	
Instructional Materials (Include specific text or digital resource links that are used by teachers and students within the unit):		
www.code.org		
Goals:	Skills / Understandings	
<ul style="list-style-type: none">To create computer programs that will help students learn to collaborate with others, develop problem-solving skills, and persist through difficult tasks.	<ul style="list-style-type: none">Create a program to complete an image using sequential steps.Choose the appropriate blocks to draw images with non-continuous lines.Know the difference between squares and rectangles and support it with evidence.Compare the positions of different objects using “above”, “below,” “next to”.Correctly identify shapes regardless of their overall size.Compare and contrast squares and rectangles by their number of sides and side lengths.Arrange sequential movement commands to search for and identify target words with a grid of letters.Use loop structure to create the smallest repeatable sequence of commands.Create a program for a given task which loops a sequence of commands.Identify actions that correlate to input events.Create algorithms using a predefined set of commands.Use appropriate coding terms in conversations.	
NI Student Learning Standards and Descriptors:		
NJSLS <ul style="list-style-type: none">8.1.5.CS.1: Model how computing devices connect to other components to form a system.8.1.5.CS.2: Model how computer software and hardware work together as a system to accomplish tasks.8.1.5.CS.3: Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.		

Unit Essential Questions:	Student Vocabulary:	Lesson Learning Statement:
<ul style="list-style-type: none"> How does computational thinking build and enhance problem solving? 	<ul style="list-style-type: none"> Algorithm Program Above Below Next to Non-continuous Problem Loop Sequential 	<ul style="list-style-type: none"> Understanding what Sequencing is. Understanding the differences between a rectangle and a square. Developing a common language relative to other shapes (above, below, next to, etc.). Developing an understanding of both sequential and looped commands to solve a problem. Understanding actions that correlate to input events. Formulating an animated, interactive story using sequencing, and loops.
Interdisciplinary Connections (include standard number and activity examples):	Assessment Strategies / Resources:	Benchmark Assessments / Products: Specific common assessments both formative and summative (provide a link to the assessments)
<p>NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.</p> <p>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</p> <p>NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>NJSLSA.SL3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.</p> <p>NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.</p>	<p>End of lesson assessments (ie., completed programs and assessment questions*)</p>	<ul style="list-style-type: none"> End of unit performance assessment: Using Code.org's Play Lab (Course 1: Lesson 16). Students (working in pairs) will code a story with each member creating the actions for his/her character using the skills learned in the unit.

<p>NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.</p> <p>NJSLSA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.</p> <p>NJSLSA.L6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.</p> <p>L.k.4 Vocabulary Acquisition and Use</p> <p>RF.K.1. Print Concepts</p>		
21st Century Life and Careers - Technology (link to standard 8.1 and 8.2) / Career and 21st Century Skills (link to standard 9.1, 9.2, 9.2) (Include standard number and activity examples from each area):		
<p>8.1.8.A.1 Demonstrate knowledge of a real world problem using digital tools. Select and use applications effectively and productively.</p> <p>8.1.8.A.2 Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.</p> <p>ISTE Standards:</p> <ol style="list-style-type: none"> 1. Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. 2. Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. 6. Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. 7. Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. <p>Career Ready Practice:</p> <ul style="list-style-type: none"> ○ CRP2. Apply appropriate academic and technical skills. ○ CRP4. Communicate clearly and effectively and with reason. ○ CRP6. Demonstrate creativity and innovation. 		

- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Warren QSAC Accommodations Chart:

- Modifications and accommodations as listed in IEP
- Scaffolding
- Modeling
- Cooperative Learning Tasks
- Active engagement strategies

*** Each Code.org lesson provides 1-4 assessment questions at the end.**