



Standards Alignment

Code.org K–5 Curriculum Course 4

1. ALGORITHMS - TANGRAMS (UNPLUGGED)

ISTE	1c. - Use models and simulations to explore complex systems and issues 2d. - Contribute to project teams to produce original works or solve problems 4b. - Plan and manage activities to develop a solution or complete a project 4d. - Use multiple processes and diverse perspectives to explore alternative solutions
CSTA	CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving CT.L1:6-02 - Develop a simple understanding of an algorithm using computer-free exercises CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out
NGSS	3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem
CC Math	Mathematical Practices: 1 - Make sense of problems and persevere in solving them 6 - Attend to precision CC Math Standards: 3.G.A.1 - Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category 5.G.B.3 - Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category
CC ELA	L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships. L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic. L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

2. MAZE AND BEE

<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes 1c. - Use models and simulation to explore complex systems and issues 4b. - Plan and manage activities to develop a solution or complete a project 6a. - Understand and use technology systems 6c. - Troubleshoot systems and applications 6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers, teachers, and others using technology CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions CT.L2-06 - Describe and analyze a sequence of instructions being followed. CT.L2-08 - Use visual representations of problem states, structures, and data. CT.L2-12 - Use abstraction to decompose a problem into sub problems. CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out. CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language. CPP.L2-05 - Implement problem solutions using a programming language including: Implement problem solutions using a programming language, including: looping behavior, conditional statements, logic, expressions, variables, and functions</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 5 - Use appropriate tools strategically 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units)

<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>3. ARTIST</p>	
<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1b. - Create original works as means of personal or group expression</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>4d. - Use multiple processes and diverse perspectives to explore alternative solutions</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers, teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-08 - Use visual representations of problem states, structures, and data</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CPP.L2-05 - Implement problem solutions using a programming language including: Implement problem solutions using a programming language, including: looping behavior, conditional statements, logic, expressions, variables, and functions</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 5 - Use appropriate tools strategically 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement 5.NBT.B.5 - Fluently multiply multi-digit whole numbers using the standard algorithm
<p>CC ELA</p>	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships
<p>4. ENVELOPE VARIABLES (UNPLUGGED)</p>	
<p>ISTE</p>	<ul style="list-style-type: none"> 1c. - Use models and simulations to explore complex systems and issues 2d. - Contribute to project teams to produce original works or solve problems 4b. - Plan and manage activities to develop a solution or complete a project 6c. - Troubleshoot systems and applications
<p>CSTA</p>	<ul style="list-style-type: none"> CL.L2-03 - Collaborate with peers, experts, and others using collaborative practices such as pair programming, working in project teams, and participating in group active learning activities CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving CT.L1:6-02 - Develop a simple understanding of an algorithm using computer-free exercises CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out
<p>NGSS</p>	<ul style="list-style-type: none"> 3-5-ETS1-1 - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost

CC Math	<p>Mathematical Practices:</p> <p>2 - Reason abstractly and quantitatively 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning</p>
CC ELA	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<h2 style="text-align: center;">5. MADLIBS (UNPLUGGED)</h2>	
ISTE	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes 1c. - Use models and simulations to explore complex systems and issues 2d. - Contribute to project teams to produce original works or solve problems 4b. - Plan and manage activities to develop a solution or complete a project</p>
CSTA	<p>CL.L2-03 - Collaborate with peers, experts, and others using collaborative practices such as pair programming, working in project teams, and participating in group active learning activities CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving CT.L1:6-02 - Develop a simple understanding of an algorithm using computer-free exercises CT.L2-12 - Use abstraction to decompose a problem into sub problems.</p>
CC Math	<p>Mathematical Practices:</p> <p>2 - Reason abstractly and quantitatively. 6 - Attend to precision. 7 - Look for and make use of structure. 8 - Look for and express regularity in repeated reasoning.</p>
CC ELA	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships. L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic. L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<h2 style="text-align: center;">6. ARTIST: VARIABLES</h2>	

ISTE	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1b. - Create original works as means of personal or group expression</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
CSTA	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
CC Math	<p>Mathematical Practices:</p> <p>1 - Make sense of problems and persevere in solving them</p> <p>2 - Reason abstractly and quantitatively</p> <p>4 - Model with mathematics</p> <p>6 - Attend to precision</p> <p>7 - Look for and make use of structure</p> <p>8 - Look for and express regularity in repeated reasoning</p> <p>CC Math Standards:</p> <p>3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities</p> <p>3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units)</p> <p>4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm</p> <p>4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures</p> <p>4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement</p> <p>5.NBT.B.5 - Fluently multiply multi-digit whole numbers using the standard algorithm</p>

<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>7. PLAY LAB: VARIABLES</p>	
<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1b. - Create original works as means of personal or group expression</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub-problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:3-03 - Create developmentally appropriate multimedia products with support from teachers, family, or student partners</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CPP.L2-08 - Demonstrate dispositions amenable to open-ended problem solving and programming</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively. 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <p>4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm</p>
<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>8. FOR LOOP FUN (UNPLUGGED)</p>	
<p>ISTE</p>	<p>1c. - Use models and simulation to explore complex systems and issues</p> <p>2d. - Contribute to project teams to solve problems</p>
<p>CSTA</p>	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L1:6-02 - Develop a simple understanding of an algorithm using computer-free exercises</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub-problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively. 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <p>4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself</p>
<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>9. BEE: FOR LOOPS</p>	
<p>ISTE</p>	<ul style="list-style-type: none"> 1a. - Apply existing knowledge to generate new ideas, products, or processes 1c. - Use models and simulations to explore complex systems and issues 4b. - Plan and manage activities to develop a solution or complete a project 6a. - Understand and use technology systems 6c. - Troubleshoot systems and applications 6d. - Transfer current knowledge to learning of new technologies.
<p>CSTA</p>	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>

NGSS	3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem
CC Math	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself
CC ELA	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships
10. ARTIST: FOR LOOPS	
ISTE	<ul style="list-style-type: none"> 1a. - Apply existing knowledge to generate new ideas, products, or processes 1b. - Create original works as means of personal or group expression 1c. - Use models and simulation to explore complex systems and issues 4b. - Plan and manage activities to develop a solution or complete a project 6a. - Understand and use technology systems 6c. - Troubleshoot systems and applications 6d. - Transfer current knowledge to learning of new technologies

CSTA	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CPP.L2-08 - Demonstrate dispositions amenable to open-ended problem solving and programming</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
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<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>11. PLAY LAB: FOR LOOPS</p>	
<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub-problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
<p>CC Math</p>	<p>Mathematical Practices:</p> <p>1 - Make sense of problems and persevere in solving them</p> <p>2 - Reason abstractly and quantitatively</p> <p>4 - Model with mathematics</p> <p>6 - Attend to precision</p> <p>7 - Look for and make use of structure</p> <p>8 - Look for and express regularity in repeated reasoning</p> <p>CC Math Standards:</p> <p>3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities</p> <p>4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm</p>

<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p> <p>β</p>
<p>12. ARTIST: FUNCTIONS</p>	
<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1b. - Create original works as means of personal or group expression</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-08 - Use visual representations of problem states, structures, and data</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-01 - Use predefined fundtions and parameter, classes and methods to divide a complex problem into simpler parts</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CPP.L2-08 - Demonstrate dispositions amenable to open-ended problem solving and programming</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 5 - Use appropriate tools strategically 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement 4.MD.C.7 - Recognize angle measure as additive 4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines 4.G.A.2 - Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size 5.NBT.B.5 - Fluently multiply multi-digit whole numbers using the standard algorithm 5.G.A.2 - Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation
<p>CC ELA</p>	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships
<p>13. SONGWRITING WITH PARAMETERS (UNPLUGGED)</p>	
<p>ISTE</p>	<ul style="list-style-type: none"> 1a. - Apply existing knowledge to generate new ideas, products, or processes 1c. - Use models and simulation to explore complex systems and issues 2a. - Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media 2d. - Contribute to project teams to solve problems 4b. - Plan and manage activities to develop a solution or complete a project 4d. - Use multiple processes and diverse perspectives to explore alternative solutions

CSTA	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-07 - Represent data in a variety of ways: text, sounds, pictures, numbers</p> <p>CT.L2-08 - Use visual representations of problem states, structures, and data</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-01 - Use predefined functions and parameters, classes and methods to divide a complex problem into simpler parts</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
CC Math	<p>Mathematical Practices:</p> <p>1 - Make sense of problems and persevere in solving them</p> <p>2 - Reason abstractly and quantitatively</p> <p>3 - Construct viable arguments and critique the reasoning of others</p> <p>6 - Attend to precision</p> <p>7 - Look for and make use of structure</p> <p>8 - Look for and express regularity in repeated reasoning</p>
CC ELA	<p>SL.3.1.D - Explain their own ideas and understanding in light of the discussion</p> <p>SL.3.3 - Ask and answer questions about information from a speaker, offering appropriate elaboration and detail</p> <p>RI.3.1 - Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers</p> <p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>14. ARTIST: FUNCTIONS WITH PARAMETERS</p>	

ISTE	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1b. - Create original works as means of personal or group expression</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
CSTA	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-07 - Represent data in a variety of ways: text, sounds, pictures, numbers</p> <p>CT.L2-08 - Use visual representations of problem states, structures, and data</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-01 - Use predefined fundtions and parameter, classes and methods to divide a complex problem into simpler parts</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CPP.L2-08 - Demonstrate dispositions amenable to open-ended problem solving and programming</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 5 - Use appropriate tools strategically 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.OA.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.MD.A.3 - Apply the area and perimeter formulas for rectangles in real world and mathematical problems 4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement 4.MD.C.7 - Recognize angle measure as additive 4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines 4.G.A.2 - Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size 5.NBT.B.5 - Fluently multiply multi-digit whole numbers using the standard algorithm 5.G.A.2 - Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation
<p>CC ELA</p>	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships
<p>15. PLAY LAB: FUNCTIONS WITH PARAMETERS</p>	
<p>ISTE</p>	<ul style="list-style-type: none"> 1a. - Apply existing knowledge to generate new ideas, products, or processes 1b. - Create original works as means of personal or group expression 1c. - Use models and simulation to explore complex systems and issues 4b. - Plan and manage activities to develop a solution or complete a project 6a. - Understand and use technology systems 6c. - Troubleshoot systems and applications 6d. - Transfer current knowledge to learning of new technologies

CSTA	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-07 - Represent data in a variety of ways: text, sounds, pictures, numbers</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p> <p>CPP.L2-08 - Demonstrate dispositions amenable to open-ended problem solving and programming</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
CC Math	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <p>4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm</p>
CC ELA	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>16. BEE: FUNCTIONS WITH PARAMETERS</p>	

ISTE	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1c. - Use models and simulations to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
CSTA	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
CC Math	<p>Mathematical Practices:</p> <p>1 - Make sense of problems and persevere in solving them</p> <p>2 - Reason abstractly and quantitatively</p> <p>4 - Model with mathematics</p> <p>6 - Attend to precision</p> <p>7 - Look for and make use of structure</p> <p>8 - Look for and express regularity in repeated reasoning</p> <p>CC Math Standards:</p> <p>4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself</p>
CC ELA	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>

17. BINARY (UNPLUGGED)

ISTE	<p>1c. - Use models and simulations to explore complex systems and issues</p> <p>2d. - Contribute to project teams to produce original works or solve problems</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>4d. - Use multiple processes and diverse perspectives to explore alternative solutions</p> <p>6d. - Transfer current knowledge to learning new technologies</p>
CSTA	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CL.L2-03 - Collaborate with peers, experts, and others using collaborative practices such as pair programming, working in project teams, and participating in group active learning activities</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-07 - Represent data in a variety of ways: text, sounds, pictures, numbers</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-05 - Describe the relationship between binary and hexadecimal representations</p> <p>CT.L3B-07 - Discuss the interpretation of binary sequences in a variety of forms</p> <p>CT.L1:6-02 - Develop a simple understanding of an algorithm using computer-free exercises</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
CC Math	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <p>4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself</p>
CC ELA	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>

18. ARTIST BINARY

ISTE	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1b. - Create original works as means of personal or group expression</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
CSTA	<p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-07 - Represent data in a variety of ways: text, sounds, pictures, numbers</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CT.L3B-07 - Discuss the interpretation of binary sequences in a variety of forms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
CC Math	<p>Mathematical Practices:</p> <p>1 - Make sense of problems and persevere in solving them</p> <p>2 - Reason abstractly and quantitatively</p> <p>4 - Model with mathematics</p> <p>6 - Attend to precision</p> <p>7 - Look for and make use of structure</p> <p>8 - Look for and express regularity in repeated reasoning</p> <p>CC Math Standards:</p> <p>4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself</p>

CC ELA	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<h2>19. SUPER CHALLENGE - VARIABLES</h2>	
ISTE	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
CSTA	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
NGSS	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself 4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement 4.MD.C.7 - Recognize angle measure as additive 4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines
<p>CC ELA</p>	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships
<p>20. SUPER CHALLENGE - FOR LOOPS</p>	
<p>ISTE</p>	<ul style="list-style-type: none"> 1a. - Apply existing knowledge to generate new ideas, products, or processes 1c. - Use models and simulation to explore complex systems and issues 4b. - Plan and manage activities to develop a solution or complete a project 6a. - Understand and use technology systems 6c. - Troubleshoot systems and applications 6d. - Transfer current knowledge to learning of new technologies

<p>CSTA</p>	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions CT.L2-06 - Describe and analyze a sequence of instructions being followed CT.L2-12 - Use abstraction to decompose a problem into sub problems CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself 4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement 4.MD.C.7 - Recognize angle measure as additive 4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines
<p>CC ELA</p>	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships

21. SUPER CHALLENGE - FUNCTIONS AND PARAMETERS

<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes 1c. - Use models and simulation to explore complex systems and issues 4b. - Plan and manage activities to develop a solution or complete a project 6a. - Understand and use technology systems 6c. - Troubleshoot systems and applications 6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions CT.L2-06 - Describe and analyze a sequence of instructions being followed CT.L2-12 - Use abstraction to decompose a problem into sub problems CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>
<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm 4.OA.C.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself 4.MD.C.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement 4.MD.C.7 - Recognize angle measure as additive 4.G.A.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines

<p>CC ELA</p>	<p>L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships</p> <p>L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic</p> <p>L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships</p>
<p>22. EXTREME CHALLENGE - COMPREHENSIVE</p>	
<p>ISTE</p>	<p>1a. - Apply existing knowledge to generate new ideas, products, or processes</p> <p>1c. - Use models and simulation to explore complex systems and issues</p> <p>4b. - Plan and manage activities to develop a solution or complete a project</p> <p>6a. - Understand and use technology systems</p> <p>6c. - Troubleshoot systems and applications</p> <p>6d. - Transfer current knowledge to learning of new technologies</p>
<p>CSTA</p>	<p>CT.L1:3-01 - Use technology resources (e.g., puzzles, logical thinking programs) to solve age appropriate problems</p> <p>CL.L1:3-02 - Work cooperatively and collaboratively with peers teachers, and others using technology</p> <p>CT.L1:6-01 - Understand and use the basic steps in algorithmic problem-solving</p> <p>CT.L2-01 - Use the basic steps in algorithmic problem solving to design solutions</p> <p>CT.L2-06 - Describe and analyze a sequence of instructions being followed</p> <p>CT.L2-12 - Use abstraction to decompose a problem into sub problems</p> <p>CT.L2-14 - Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions</p> <p>CT.L3A-03 - Explain how sequence, selection, iteration, and recursion are building blocks of algorithms</p> <p>CPP.L1:6-05 - Construct a program as a set of step-by-step instructions to be acted out</p> <p>CPP.L1:6-06 - Implement problem solutions using a block-based visual programming language</p>
<p>NGSS</p>	<p>3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p>

<p>CC Math</p>	<p>Mathematical Practices:</p> <ul style="list-style-type: none"> 1 - Make sense of problems and persevere in solving them 2 - Reason abstractly and quantitatively 4 - Model with mathematics 6 - Attend to precision 7 - Look for and make use of structure 8 - Look for and express regularity in repeated reasoning <p>CC Math Standards:</p> <ul style="list-style-type: none"> 3.MD.C.6 - Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units) 4.NBT.B.4 - Fluently add and subtract multi-digit whole numbers using the standard algorithm
<p>CC ELA</p>	<ul style="list-style-type: none"> L.3.6 - Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships L.4.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic L.5.6 - Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships



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