Grade 3 STEM Programming Patterns	
Grade	**3rd**
Unit of Study	**Programming Patterns**
Length of Unit	**⅓ Semester**

Missouri Learning Standards	
Priority Expectations	**Supporting Expectations**
1B-CS-02. Model how computer hardware and software work together. **1B-AP-10**. Create programs that include sequences, events, loops, and conditionals. **1B-AP-11**. Break down problems into smaller, manageable subproblems. **1B-AP-13**. Use an iterative process to plan the development of a program, including others' perspectives. MLS Science Standards Grades K-5	**3-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. **3-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.

Unit Learning Targets	
1B-CS-02 **1B-AP-10** **1B-AP-11** **1B-AP-13** **3-ETS1-1** **3-ETS1-2**	Activity 1: Story Factory I can understand and answer questions about the story presented.
1B-CS-02 **1B-AP-10** **1B-AP-11** **1B-AP-13** **3-ETS1-1** **3-ETS1-2**	Activity 2: Rosie's Path I can create simple codes that include sequences, events, loops, and conditionals.
1B-CS-02 **1B-AP-10**	Activity 3: Let's Dance

1B-AP-11 **1B-AP-13** **3-ETS1-1** **3-ETS1-2**	I can model how computer hardware and software work together as a system to accomplish tasks.
1B-CS-02 **1B-AP-10** **1B-AP-11** **1B-AP-13** **3-ETS1-1** **3-ETS1-2**	Activity 4/Project: Digital Animation I can demonstrate teamwork through effective communication while building a program that include sequences, events, loops, and conditionals.
1B-CS-02 **1B-AP-10** **1B-AP-11** **1B-AP-13** **3-ETS1-1** **3-ETS1-2**	Activity 5/Problem: You Make the Choice Note: This section is available, but will not be able to finish it within this time frame.

Intervention and Enrichment
See Project Lead the Way website for all necessary resources to modify or enrich the curriculum. Project Lead the Way

Assessments	
MLS (Learning Goal)	**Description or Location**
1B-CS-02 **1B-AP-10** **1B-AP-11** **1B-AP-13** **3-ETS1-1** **3-ETS1-2**	Conclusion Questions from Project Lead the Way.

Vocabulary			
Program Loops	Code Conditional Statements	Pair Programming Design Process	Animations

Instructional Materials
See Project Lead the Way website for all necessary resources. Project Lead the Way

Additional Instructional Resources
See Project Lead the Way website for all necessary resources. Project Lead the Way

Reflections for Future Revisions