#### Swedesboro-Woolwich School District's STEAM Curriculum Guidance Document

### **GRADE 3– Unit 2 Circuits**

### Mission Statement

The primary goal of the Swedesboro-Woolwich School District is to prepare each student with the real life skills needed to compete in a highly competitive global economy. This will be achieved by providing a comprehensive curriculum, the integration of technology, and the professional services of a competent and dedicated faculty, administration, and support staff.

Guiding this mission will be Federal mandates, including No Child Left Behind, the New Jersey Core Curriculum Content Standards, and local initiatives addressing the individual needs of our students as determined by the Board of Education. The diverse resources of the school district, which includes a caring PTO and active adult community, contribute to a quality school system. They serve an integral role in supporting positive learning experiences that motivate, challenge and inspire children to learn.

## **Unit/Module Overview**

In unit 2, students will learn to:

• While practicing a growth mindset and the design process, the student will create a working circuit.

# Standards Covered in Current Unit/Module

Related Standards and Learning Goals

**CS.3-5.8.2.5.ED.3 -** Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

**CS.3-5.8.2.5.ED.2** - Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.

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Unit/Module Weekly Learning Activities and Pacing Guide				
Topic & # Days	NJ Standards	Critical Knowledge & Skills	Possible Resources & Activities	
Introduction to Circuits (1)	• CS.3-5.8.2.5.ED.3	Obj. We are learning to:  ■ identify, illustrate and explain the components of a basic circuit.  Suggested Formative Assessment(s):  ■ Building a Basic Circuit.pdf	<ul> <li>Activity</li> <li>Building a basic circuit (teamwork activity)</li> <li>Video</li> <li>Introduction to Simple Circuits</li> <li>Materials</li> <li>Copper Circuit (1).pdf</li> <li>LED light bulb mini</li> <li>Copper tape</li> <li>Watch battery</li> </ul>	
Circuit Project Introduction (1)	• CS.3-5.8.2.5.ED.2	Obj. We are learning to:      draft a prototype / schematic of basic math practice circuit quiz board.  Suggested Formative Assessment(s):      Times Table Practice.pdf	<ul> <li>Activity</li> <li>Introduction to Circuit Project utilizing the design process (Times Tables Practice Board)</li> <li>Create Prototype</li> <li>Materials</li> <li>Times table practice sheet</li> <li>Ruler</li> <li>Hole puncher</li> <li>Pencil</li> <li>Finished project example</li> </ul>	
Creation of Math Practice Circuit (6)	• CS.3-5.8.2.5.ED.3	Obj. We are learning to:  utilize a prototype and a set of instructions to create and assemble a math practice quiz board with correct mathematical problems.  Suggested Summative Assessment(s):  Scale Tracking Sheet Gr 3 Unit 2	<ul> <li>Activity</li> <li>Design Process Circuit Activity</li> <li>Build and test your math practice board following the design process</li> <li>Circuit board design process description</li> </ul>	

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Circuit Rubric	Materials
Circuit Board Description	<ul> <li>Cardstock</li> </ul>
	o Ruler
	<ul> <li>Sharpies</li> </ul>
	<ul> <li>Foil sheets</li> </ul>
	<ul> <li>Circuit testers</li> </ul>
	<ul> <li>Crayons</li> </ul>
	<ul> <li>Hole puncher</li> </ul>
	<ul> <li>Finished project example</li> </ul>

<u>Link to Additional Components including Cross Curricular Connections, Accommodations, Assessments, Etc</u>

**ELA Enduring Understanding Statements**