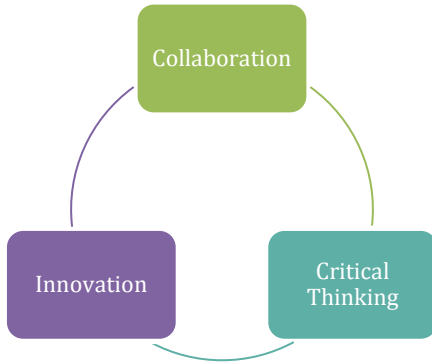


STEM School Chattanooga

11th Grade PBL Unit Plan Template

Unit Quarter: 3rd

Title: The Imagination Machine



Learning Target Topics

Collaboration: Working with other people on a project or problem to achieve a shared goal.

Creative Thinking: Accessing, using, and applying information and knowledge.

Innovation: Using creative thinking to construct something new and valuable.

Grade Level	11 th Grade	Unit Length	9 Weeks
Industry Partner	<ul style="list-style-type: none"> Principal Brown and Mrs. Dowd, Librarian, Red Bank Elementary School 		
Unit Overview	STEM student teams will design an interactive electronic-mechanical system to create an engaging experience for students to learn math and scientific principles at Red Bank Elementary School. The system will serve as the centerpiece in the school library's Maker Space and must support checking in or checking out books. Students will build full-scale fully-functioning prototypes. Students should include electronic capabilities, such as Arduino or Raspberry Pi. This project will require use of the ShopBot, laser cutter, and vinyl cutter. For the school partner, the focus is on the thoughtful, creative design of the system to inspire students. For the STEM School, the focus is on the innovation skills demonstrated by the student teams.		
Unit Essential Issue	<ul style="list-style-type: none"> Project: <i>Design an interactive electronic-mechanical system to engage elementary school students</i> 		
Kick Off Event	Kick Off: January 12th Principal Brown and school librarian Mrs. Dowd will explain the vision for the library and maker space. They will discuss the current process of checking library books in and out and how they want to transform this experience. They will explain the requirements for the imagination machine and other resources, such as retired books, that can be used in the project.		
Culminating Events	Presentation Day: TBD (March 14th-18th) The student teams will present their functioning Imagination Machine to the project sponsors and students of Red Bank Elementary they choose to include. The project sponsors will evaluate the designs and provide constructive feedback to the teams.		
Common Assessment	Students will be scored using the Association of American Colleges and Universities rubric for Creative Thinking Skills. All 4's will equate to Advanced, scores of 3 and 4 will equate to Proficient, and any scores below a 3 will equate to Below Basic. Items that will be used to score student work: <ul style="list-style-type: none"> Assignments (Plans, Weekly Prototype Reports, Design Process Work Products, etc.) Presentation Functioning Imagination Machine 		