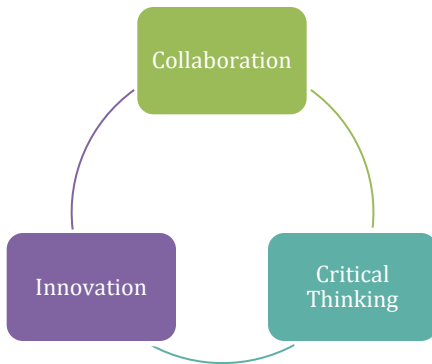


STEM School Chattanooga

10th Grade PBL

Unit Plan Template

Unit Quarter 4: Volkswagen PBL



Learning Target Topics

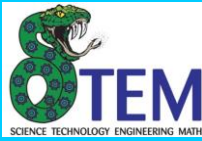
Collaboration: Working with other people on a project or problem to achieve a shared goal.

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

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

Grade Level	10 th Grade	Unit Length	5 Weeks
Industry Partner	Volkswagen Volkswagen Academy Master Training Specialist - Albert Graser		
Unit Overview	This unit will focus on additive manufacturing as a way to improve and personalize the user experience of the 2016 Volkswagen Passat for new drivers. Students will learn about and use Design Thinking to investigate needs and develop solutions. Students will then use design software such as AutoCAD or Google SketchUp to create renderings of their vehicle improvements. Students will then create a multimedia presentation in which they introduce their vehicle improvements to our partners at Volkswagen with a targeted marketing campaign.		
Unit Essential Issue	<ul style="list-style-type: none"> How might we improve the user experience of a 2016 Volkswagen Passat using 3-D printing? 		
Kick Off Event	Students will work together to design a better iPad cover, then present their results in a short pitch to peers and teachers. Upon completion of the pitches, teachers will talk about some of the effective techniques groups used to pitch their new iPad covers. Teachers will then make connections to Design Thinking.		
Culminating Events	<p>Student groups will deliver a multimedia sales pitch directed to Volkswagen executives in which they highlight their vehicle improvements. The pitch should include how they developed their idea, the benefits to the consumer, and the costs to the manufacturer and consumer. This presentation will be in front of the entire 10th grade and 10th grade teachers.</p> <p>The top three teams selected by the teachers will share their creations and sales pitches with our partners at Volkswagen.</p>		

Common Assessment



PBL Rubric

Mini-PBL: #4 Volkswagen
 Student: _____
 Date: _____

	Advanced	Proficient	Needs Improvement
Innovation, Collaboration, Critical Thinking	<ul style="list-style-type: none"> 3D print your aftermarket piece and the other pieces that are directly associated with interlocking mechanism 	<ul style="list-style-type: none"> Design an aftermarket piece that will improve and personalize the user experience of the 2016 Volkswagen Passat The aftermarket piece must interlock unobtrusively with the interior or exterior of the car 	
Minimum Requirement Components: Must be included to be graded	<ul style="list-style-type: none"> Team contract with timelines, responsibilities, decision making process, and intervention process Aftermarket parts must be able to fit securely into place without adhesives and detach without damaging the vehicle <ul style="list-style-type: none"> Interlocking is defined as one-part fitting together with another part Must include multimedia (video, sound, images) within the presentation Digital file (using AutoCAD, TinkerCAD, or other design software approved by Mr. David.) must detail the aftermarket part and how it interlocks with the car 		