

## Classroom Applications Approach for 8.1 Technology Grades 9-12

<b>Standard: All students will develop an understanding of the nature and impact of technology, engineering, technological design and the designed world as they relate to the individual, global society, and the environment.</b>		
<b>Strand: Design: Critical Thinking, Problem Solving, and Decisions Making</b>		
<b>Essential Question(s)</b>	<b>Enduring Understanding(s)</b>	
How does the use of the design process assist in solving problems?	The design process is fundamental to the technology and engineering disciplines.	
<b>Content Statement(s)</b>	<b>CPI #</b>	<b>Cumulative Progress Indicator(s)</b>
The design process is a systemic approach to solving problems.	8.2.12.B.1	Design and create a product that maximizes conservation and sustainability of scarce resources by using entrepreneurial skills and the design process.
<b>Instructional Focus</b>		
<ul style="list-style-type: none"> <li>▪ Use the <a href="#">design process</a> to research, think creatively and construct knowledge               <ul style="list-style-type: none"> <li>○ Conducting first person interviews</li> <li>○ Drawing inferences and conclusions from data</li> </ul> </li> </ul>		
<b>Sample Assessments</b>		
<p><b>Performance Assessment Task</b></p> <p>As part of a service-learning project, create a public service announcement (PSA) that could be aired on the local television network to inform viewers about how to reduce energy costs related to transportation. Research fuel costs, consumption, and various transportation systems to gather data about trends, consequences and suggest possible solutions.</p>		
<b>Instructional Strategies</b>		
<ul style="list-style-type: none"> <li>▪ <b>Interdisciplinary Connections</b> <ul style="list-style-type: none"> <li>○ Conduct interviews with transportation experts and/or scientists regarding cost effective means for public transportation systems.</li> <li>○ Collaborate with a statistician to compile, review, calculate and present data analysis</li> </ul> </li> <li>▪ <b>Technology Integration</b> <ul style="list-style-type: none"> <li>○ Include multimedia in the PSA For more information:  <a href="http://www.eweek.org/EngineersWeek/Introduce.aspx">http://www.eweek.org/EngineersWeek/Introduce.aspx</a>  <a href="#">INTRODUCE A GIRL TO ENGINEERING DAY FEBRUARY 19, 2011</a>   <a href="#">Pledge Roster</a></li> </ul> </li> <li>▪ <b>Global Perspective</b> <ul style="list-style-type: none"> <li>○ Research the energy policies of several foreign countries related to transportation systems to inform your research on this issue.</li> </ul> </li> </ul>		