



# SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

## LESSON 5

<b>Lesson Plan Title:</b> Zipline Adventures		<b>Instructor:</b>
<b>Suggested Total Time for Lesson (minutes):</b> 45-65 minutes (1-2 day)		
<b>Content Focus - What Will Students Learn? (Content Skill Sets)</b>		
<p>0972.ST.2461.7 Identify principles of the problem-solving process            0972.ST.2461.8 Outline the steps in the design process            0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses            0972.ST.2461.11 Develop Details of a Solution            0972.ST.2461.12 Develop, test, and redesign prototypes            0972.ST.2461.28 Make an oral presentation            0972.ST.2461.31 Contribute to a team project            0972.ST.2461.8 Solve problems using appropriate units in engineering systems</p>		
<b>Materials and Resources- What do you need to assemble and prepare before the lesson?</b>		
<b>Materials:</b> <ul style="list-style-type: none"> <li>• 1 Sheet of 11"x8.5" Cardstock</li> <li>• 2 Tongue Depressors</li> <li>• 2 Paper Clips</li> <li>• 2 Rubber Bands</li> <li>• 1 Bendy Straw</li> <li>• 1 Toilet Paper Roll</li> <li>• 12 inch of string</li> <li>• 6 inch of masking tape</li> <li>• Small figure (such as Lego man or similar object)</li> <li>• Scissors (cannot be in design)</li> </ul>		<b>Resources:</b> <ul style="list-style-type: none"> <li>• <a href="https://wvtourism.com/fly-in-wv/">https://wvtourism.com/fly-in-wv/</a></li> </ul>
<b>Lesson Outline: What learning activities will your students do?</b>		
<b>Time</b>	<b>Sequence/Description of Learning Activity</b>	
10-15 minutes	<b>Get Started/Explain:</b> Students will be introduced to the Challenge and issued Activity 3 Zipline Adventures	
30-35 minutes	<b>Discover/Engage/Practice:</b> Students will form groups or teacher may assign groups of 3-4 Students will work within these design teams to create a transport vessel that would allow peoples pets to travel with them on some of West Virginias great zipline tours.	
10-15 minutes	<b>Check for Understanding/Summarize/Close:</b> Students will explain the challenges of working within Teams Students will elaborate on why it is important to clearly define design constraints prior to creating a product Students will explain how they came about deciding on their designs	
<b>Modifications, Support, and Extensions (for those students with IEP)</b>		
<b>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</b>		