



# SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

## LESSON 7

|   |  |   |
|---|--|---|
| <b>Lesson Plan Title:</b> Mini Golf Course Design   |  | <b>Instructor:</b>  |
| <b>Suggested Total Time for Lesson (minutes):</b> x minutes (x day)   |  |   |
| <b>Content Focus - What Will Students Learn? (Content Skill Sets)</b>   |  |   |
| <p>0972.ST.2461.7 Identify principles of the problem-solving process<br/>           0972.ST.2461.8 Outline the steps in the design process<br/>           0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses<br/>           0972.ST.2461.11 Develop Details of a Solution<br/>           0972.ST.2461.12 Develop, test, and redesign prototypes<br/>           0972.ST.2461.28 Make an oral presentation<br/>           0972.ST.2461.31 Contribute to a team project<br/>           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>• Isometric Paper</li> <li>• Card Stock</li> <li>• Cardboard</li> <li>• Balsa Wood</li> <li>• Small Solo Cups</li> <li>• Felt</li> <li>• Playdough</li> </ul>  |  | <b>Resources:</b> <ul style="list-style-type: none"> <li>• <i>Oglebay - Almost Heaven - West Virginia: Almost Heaven - West Virginia (wvtourism.com)</i></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><br>Students will be introduced to the Challenge and issued Activity Golf Course Design Brief   |   |
| 30-35 minutes   | <b>Discover/Engage/Practice:</b><br>Students will form groups or teacher may assign groups of 3-4. Students will work within these design teams to design 3 consecutive holes of miniature golf. The 3 holes must have a consistent theme and be related to each other. Students will communicate design ideas nonverbally (simulate virtual design challenge) |   |
| 10-15 minutes   | <b>Check for Understanding/Summarize/Close:</b><br>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>   |  |   |
| <br><br><br><br>  |  |   |
| <b>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</b>   |  |   |
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