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| **Course:** Introduction to Engineering | | | | | | |
| **Unit:** Teamwork and Concurrent Engineering | | | | **exercise:** | | **Time Frame:** 1-2 hours |
|  | Preparation: *Summary of “to do’s” that the teacher should understand and prepare before bringing this lesson to the classroom.* | | | | | |
| **Information**  Each exercise will list information students should have before starting the exercise here.  **Materials**  Each exercise will list the appropriate materials needed in this section.  **Tools**  Each exercise will list the appropriate tools needed in this section. | | | | | | |
|  | Safety: *Summary of safety strategies in the lesson.* | | | | | |
| Please use this space to describe safety procedures or highlights for this lesson. | | | | | | |
|  | Desired Results: | | | | | |
| Established Goals: | |  | Transfer: | | | |
| *Problem Solving Techniques and Applications Standards:*  Teachers should use the STEM Academy Standards Correlation System available in the STEM Connections area of a unit to extract specific standards and insert these standards here. | | *Students will be able to independently use their learning to…*   * Articulate the advantages of teamwork; * Describe characteristics of great teams. | | | |
| Meaning: | | | |
| Understandings  *Students will understand that...*   * Teams grow and change, the growths come in stages; * Teams do not only need a good leader, but good followers as well. | | Essential Questions  *Students will keep considering...*   * How the group dynamic can adapt to different situations; * Different ways to improve group dynamic. | |
| Acquisition OF KNOWLEDGE AND SKILL: | | | |
| *Students will know...*   * Team attributes; * Modes of team action; * How teams can increase and decrease productivity. | | *Students will be skilled at...*   * Express the effects of a global marketplace;   Classifying attributes and leaderships styles. | |
|  | Evidence: | | | | | |
| Evaluative Criteria: | |  | Assessment Evidence: | | | |
| * Constructed Well * Plane not tested * Original person found * Effective communication * Entire team agrees * Effective communication | | | *Performance Task(s):*  **Airplane in a Box**  In this exercise, students will build either a paper airplane or a box while using teamwork and being in a team environment  **Precision Instructions**  Students will be tasked with constructing a paper airplane from another students directions, and then will find the original designer of the plane.  **Desert Survival**  Teams are tasked with ranking a list of 15 survival items by importance. All team members must agree on the team ranking. | | | |
| * Correct Answers | | | *Other Evidence:*   * Online quiz | | | |
|  | Learning Plan: *Summary of Key Learning Events and Instruction* | | | | | |
| 1. **Set Introduction**   Choose a major sporting event that is taking place while teaching this lesson. Discuss how the different players work together to win. Is there a star athlete on the team? Could he/she win if it weren’t for the other players?   1. **PowerPoint**   This lecture is based around the provided text and PowerPoint. Review the text before giving the presentation to expand you list of examples and knowledge over the content   1. **Student Notes**   Encourage your students to take notes as this materials will be tested son the day following the lecture   1. **Student Time**   Allow at least one night in between your lecture and the online quiz for your students to study.  **Progress Monitoring:**   * The instructor will need to monitor the classroom, checking student’s work and ensuring students are on task and following directions. * Ensure students store their projects at the end of class and leave all materials in the room. * At the end of the activity, post student projects in the room and provide appropriate feedback | | | | | | |
|  | Differentiation: *Summary of Key Differentiation Techniques* | | | | | |
| Please use this space to insert your differentiation techniques. Depending on the needs of students, various techniques might be needed in a classroom, therefore use the information below and experts in the area needed to design your plan for differentiation.  The ASCD Study Guide for Integrating Differentiated Instruction and Understating by Design: Connecting Content and Kids.  by Carol Ann Tomlinson, Jay McTighe  Integrating Differentiated Instruction and Understating by Design: Connecting Content and Kids.  by Carol Ann Tomlinson, Jay McTighe  ISBN-13: 978-1416602842  ISBN-10: 1416602844  Differentiating Reading Instruction  *by Laura Robb.*  ISBN13: 9780545022989  A Teacher's Guide to Differentiating Instruction  The Center for Comprehensive School Reform and Improvement | | | | | | |

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|  | career Connections: *Summary of Career Opportunities Associated with this Lesson* |
| Please use this space to insert careers that might be connected to this lesson. This section will need continuous updating as new careers and emerging technologies change the opportunities available in the workforce.  Good sources for career connections:  Occupational Outlook Handbook  <http://www.bls.gov/ooh>  The National Career Clusters® Framework  <http://www.careertech.org/career-clusters> | |
|  | Keywords: *Please Insert Keywords from this Lesson with their Definitions* |
| Please use this space to insert keywords and their definitions  Use resources like [dictionary.com](http://dictionary.reference.com/) to find definitions to your keywords | |