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|  | Preparation: *Summary of “to do’s” that the teacher should understand and prepare before bringing this lesson to the classroom.* | | | | |
| Teachers will need to ensure that the proper supplies are available for students to build their solutions.    **Materials**   * Ruler * Dial Caliper     **Tools**   * Computer or Chromebook     **Information**  Before starting this exercise, students should have an understanding of:     * Presentation: Measurement * Website: Using a Caliper and Dial Caliper Practice * Video: Handling and Dial Caliper Use; Dial Caliper Application Building Block | | | | | |
|  | Safety: *Summary of safety strategies in the lesson.* | | | | |
| There are no safety exercises for this exercise. | | | | | |
|  | Desired Results: | | | | |
| Established Goals: | | |  | Transfer: | |
| *Problem Solving Techniques and Applications Standards:* | | | *Students will be able to independently use their learning to…*   * Demonstrate the correct use of rulers and calipers; * Use measurement tools Use measurement tools accurately. | |
| Meaning: | |
| Understandings  *Students will understand that...*   * Different tools are needed to take different types of measurements; * Imperial and metric measurements are vastly different. | Essential Questions  *Students will keep considering...*   * How accurate different types of measurements are; * If there is a better tool for a certain task. |
| Acquisition OF KNOWLEDGE AND SKILL: | |
| *Students will know...*   * Specific uses and operations of various measurement tools; * How specific measurement tools work. | *Students will be skilled at...*   * Choosing the correct tool for a task; * Diagraming results of peer data compilation in an experiment. |
|  | Evidence: | | | | |
| Evaluative Criteria: | | |  | Assessment Evidence: | |
| * Completed * Correct test answers | | | | *Performance Task(s):*  **Ruler Activity**  Students will learn and be tested on proper use of rulers. | |
| * Correct answers * Accurate measurements | | | | *Other Evidence:*   * Corresponding test questions * Collected measurement sheets | |
|  | Learning Plan: *Summary of Key Learning Events and Instruction* | | | | |
| 1. **Set Introduction**   This activity will take one class day to complete.   1. **Familiarity**   The instructor should be familiar with and present the materials or PowerPoint associated with measurement in this activity previous to the hands-on activity.   1. **Review**   Have your students review the information under Content Knowledge.     1. **Student Time**   Give each student ample time to complete the activity. Circulate the room to verify each student is on tasks and progressing forward.     1. **Collect**   At the completion of the activity, collect each student’s tools.     1. **Class Review**   If time permits, review the activity as a class and discuss the correct measurements and answers.     1. **Remind Students**   Remind your students to review all of the material from this unit in preparation for the test.    **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 | | | | | |
|  | | | career Connections: *Summary of Career Opportunities Associated with this Lesson* | | | | |
| **Civil Engineer**  Civil engineers rely on accurate measurements to design and construct various structures.    **Architect**  Architects use accurate measurements to design various structures.    **Health Science**  Many of those in the health science field rely on accurate measurements when working with humans and animals. | | | | | | | |
|  | | | Keywords: *Please Insert Keywords from this Lesson with their Definitions* | | | | |
| ACCURATE - the quality or state of being correct or precise.    MEASUREMENT - the action of measuring something.    INSTRUMENT - a tool or implement, especially one for delicate or scientific work | | | | | | | |