

***LESSON TITLE HERE
LESSON CONTENT AREA HERE***

***LESSON PURPOSE/RATIONALE HERE: Students will work with basic blueprints to create a paper birdhouse and then analyze the surface area to determine the exact amount of materials that are needed to cover the exterior of the birdhouse.***

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| NRS LEVEL(S): Beginning ABE/Low intermediate ABE | ESTIMATED TIMEFRAME: 90 minutes |
| [College and Career Readiness S](http://lincs.ed.gov/publications/pdf/CCRStandardsAdultEd.pdf)tandardsMajor Work of the Level: *Level C: Geometry: Developing an understanding and solving problems involving volume and surface area*Lead Standard(s):Choose an item.Choose an item.*Level B: Geometric measurement: understand concepts of area and relate to area of multiplication and division.*Choose an item.Supporting Standard(s):*Level B: Represent and solve problems involving multiplication and division.**Level E: Understand solving equations as a process of reasoning and explain the reasoning.*Choose an item.Choose an item. | **EMPLOYABILITY SKILLS COMPONENTS*****Effective Relationships:***[x]  **Interpersonal Skills** **Understands teamwork and works with others**[x]  **Personal Qualities**  **Demonstrates a willingness to learn*****Workplace Skills:***[ ]  **Resource Management**Choose an item.[x]  **Information Use** **Analyzes**[ ]  **Communication Skills** **Comprehends written material**[ ]  **Systems Thinking**Choose an item.[ ]  **Technology Use**Choose an item. |
| APPLIED KNOWLEDGE |  |
| APPLIED ACADEMIC SKILLS:[x]  Reading skills[ ]  Writing skills[x]  Math strategies/procedures[ ]  Scientific principles/procedures | **CRITICAL THINKING:**[ ]  **Thinks creatively**[x]  **Thinks critically**[x]  **Makes sound decisions**[x]  **Solves Problems**[x]  **Reasons**[x]  **Plans/organizes** |
| STANDARDS FOR MATHEMATICAL PRACTICE |
| *MP1. Make sense of problems and persevere in solving them.* |  |  |
| MATERIALS* Birdhouse Template: <http://classofchyna.weebly.com/wru-lesson-plan.html>
* Building is for the Birds worksheets Video: <http://classofchyna.weebly.com/wru-lesson-plan.html>
* <https://www.youtube.com/watch?v=iGQjDLWdk0M>

*(Note: Birdhouse template should be preprinted on heavy cardstock)* | **KEY VOCABULARY:** measure, centimeters, area, formula, height, length, base, width, multiply, add, subtract, rectangle, triangle***Format for assessment of vocabulary:***  **Students will use the vocabulary when writing an explanation of the process that they used to determine the surface area of their birdhouse.** |
| LEARNING TARGET: “I can…”LESSON OBJECTIVES: Students will:* Students will learn the formula for finding the surface area of triangles and rectangles.
* Students will apply their multiplication skills to determine the surface area of triangles and rectangles.
* Students will use their addition skills to determine the surface area of complex shapes.
* Students will use metric measurements to determine the length of real objects.
* Students will follow written instructions.
* Students will use critical thinking skills to analyze and solve complex word problems
 | **REMEDIATION AND ENRICHMENT:** |
| ASSESSMENT OF OBJECTIVES: Students will demonstrate mastery of the objectives by accurately measuring and completing charts and answering word problems with a 70% accuracy.  |
|  | ***TEACHER SAYS/DOES:*** | ***STUDENTS SAY/DO:*** | ***KEY ADVANCES*** |
| INTRODUCTION:15 minutes*Estimated timeframe here* | TPS: I would like you to collaborate with your partner(s) to come up with at least 2 reasons that support or disprove the following claims. One person in your group should record the answers of your group. Are the following statements true or false? Provide evidence to support your position.* The metric system is used all around the world.
* Meters are smaller than centimeters.
* Precise measurement is important in my life.
* The formula for finding the area of a rectangle is side 1 + side 2+ side 3 + side 4.
* It is impossible to find the area of a circle.
* Bird houses are necessary.
 |  Students work with their partners to support the provided claims. Students will then share responses with the whole class. |  |
| INSTRUCTOR MODELING *and*GUIDED PRACTICE:*Estimated timeframe here: 30 minutes**Teacher should take the student responses from TPS and direct the students to the “correct” answers.* *Then distribute metric rulers and start the 2 minute video measuring in cm and mm.* | * Distribute rulers to the group and then watch the video: <https://www.youtube.com/watch?v=iGQjDLWdk0M>

Afterwards, distribute “Building is for the Birds worksheet.” Teacher should read/work through pages 1 and 2 of the worksheet with the whole group. Teacher should walk around the room to make sure that everyone is measuring correctly.Distribute “birdhouse template”. Go over instructions with students. Make sure that the tabs are folded under the template and out of the way before students begin measuring.  |  | [ ]  **Focus**[x]  **Coherence**[ ]  **Rigor** |
| INDEPENDENT PRACTICE:*Estimated timeframe here: 30 minutes* | Direct students to complete page 3 and 4, collaboratively. |  | [x]  **Focus**[ ]  **Coherence**[ ]  **Rigor** |
| STUDENT REFLECTION *and*CLOSURE:*Estimated timeframe here:10 minutes*  | Complete exit ticket on page 5 |  |  |