WAMC Lab Template

Math Concept(s): Area of a Rectangle
Source / Text: Lab sheet
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Attach the following documents:

Lab Instructions: Finding the area of three rectangular areas in the building.

Student Handout(s): How do you find area? Area=Length X Width

Rubric and/or Assessment Tool: Worksheet

Indicate "*SPECIFIC*" relationship to Science, Technology, or Engineering: Construction

Short Description (Be sure to include where in your instruction this lab takes place):

Lab Plan

Lab Title: Finding the Area of a Rectangle

Prerequisite skills: What shape indicates that it is a rectangle.

Lab objective: obtain knowledge of how to find the area of a rectangle

Standards:

Mathematics K–12 Learning Standards:

- G-CO.9 Prove theorems about lines and angles
- G-MG.1 Use geometric shapes, their measures, and their properties to describe objects.

Standards for Mathematical Practice:

- Practice 1: Make sense of problems and persevere in solving them.
- Practice 4: Model with mathematics.
- Practice 5: Use appropriate tools strategically.
- Practice 7: Look for and make use of structure.
- Practice 8: Look for and express regularity in repeated reasoning.

K-12 Learning Standards-ELA (Reading, Writing, Speaking & Listening):

- EST.9-10.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

- RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
- RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficienctly.

Leadership/21st Century Skills:

<u>21st Century Interdisciplinary themes</u> (Check those that apply to the above activity.)
☐ Global Awareness ☐ Financial/Economic/Business/Entrepreneurial Literacy ☐ Civic Literacy
☐ Health/Safety Literacy ☐ Environmental Literacy

<u>21st Century Skills</u> (Check those that students will demonstrate in the above activity.)

LEARNING AND INNOVATION	**INFORMATION, MEDIA & TECHNOLOGY SKILLS**	**LIFE & CAREER SKILLS**	**Productivity and Accountability**
<u>Creativity and Innovation</u>	<u>Information Literacy</u>	<u>Flexibility and Adaptability</u>	☐ Manage Projects
☐ Think Creatively	☒ Access and Evaluate Information	☒ Adapt to Change	☐ Produce Results
☐ Work Creatively with Others	☒ Use and manage Information	☐ Be Flexible	<u>Leadership and Responsibility</u>
☐ Implement Innovations	<u>Media Literacy</u>	<u>Initiative and Self-Direction</u>	☒ Guide and Lead Others
<u>Critical Thinking and Problem Solving</u>	☐ Analyze Media	☒ Manage Goals and Time	☒ Be Responsible to Others
☒ Reason Effectively	☐ Create Media Products	☐ Work Independently	
☐ Use Systems Thinking	<u>Information, Communications and Technology (ICT Literacy)</u>	☒ Be Self-Directed Learners	
☒ Make Judgments and Decisions	☐ Apply Technology Effectively	<u>Social and Cross-Cultural</u>	
☒ Solve Problems		☒ Interact Effectively with Others	
<u>Communication and Collaboration</u>		☒ Work Effectively in Diverse Teams	
☒ Communicate Clearly			
☒ Collaborate with Others			

Teacher Preparation: (What materials and set-up are required for this lab?)

Materials

- Handouts
- Tape measures in feet and inches

Set-Up Required:

- None

Lab Organization Strategies:

Leadership (Connect to 21st Century Skills selected):

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Cooperative Learning:

- The students will be placed in pairs.

Expectations:

- That all partners will come back to the room having measured three rectangular items.

Timeline:

- 50 minutes

Post Lab Follow-Up/Conclusions:

Discuss real world application of learning from lab

- The students will be able to find the area of a rectangle which involves real-world application from building, to buying carpet, furniture, and various rectangular shapes.

Career Applications

- Construction
- Engineering

Optional or Extension Activities

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