

Remodeling Area and Perimeter

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WebQuest Description: Perimeter and Area Lesson

Grade Level: 3-5

Curriculum: Math

Keywords: Area Perimeter

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Introduction

You are a contractor and have been hired to remodel two rooms. You and your crew will recarpet, repaint, replace baseboards, and put up a wall paper border in two rooms of the customer's home. You must use the correct geometry calculations to calculate the correct amounts of all of these materials that you will need to complete the project correctly.

Tasks

The two rooms, let's call them room A and room B have different dimensions. Room A is 12.5 feet by 9 feet and Room B is 15 feet by 30 feet. You must find how many square yards of carpet are needed for each. You must also calculate how many feet of baseboard each will need and how many yards of wall paper border. You will also need to calculate how many square feet of paint you will need to cover for both rooms. Room A will be green and Room B will be beige. One gallon of paint will cover about 100 square feet so how many gallons will you need for each room? Use the kahn academy web page and the other web resources to review area and perimeter before you begin your job. You do not want to make mistakes here as mistakes can cost alot of \$\$\$money. Good luck!

Process

You will review the formulas for area and perimeter on the web sites given. You will use graph paper and draw out each room according to scale, using one square to represent on square foot. You will mark the appropriate dimensions on each and show your calculations on the same graph paper. You will list the final amounts of each material that you will need to successfully complete the remodel project given. Make sure to calculate in the correct amounts. Carpet is in square yards. Paint is in gallons. Baseboards and wall paper border are in feet (just round up to the nearest foot if needed.) Make sure to list paint by correct color too. After you have finished, partner up and compare responses. Recheck calculations if necessary. Turn in your materials projections.

Evaluation

Students will demonstrate the ability to know when to use area versus perimeter in a real world situation. Students will successfully use the appropriate formulas to calculate perimeter and area for each assigned task given in the remodel. Students will take a quiz to assess the ability to use the formulas appropriately.

Category and Score					Score
				Total Score	

Conclusion

What have you learned about the different applications of area versus perimeter in this remodel. Write a short explanation of how each was applied in your project. For an extra credit piece...how would you calculate the tile on the floor in one of the rooms for a triangular shower with a base of 6 feet and an altitude of 8 feet?

Teacher Page

This webquest is designed to help students not only see the real implications of geometry in the real world, but also to help them see conceptually the difference between area and perimeter. It also reinforces the memorization of the formulas for area and perimeter for rectangles. You could add on to this lesson with many different shapes and make it as complicated or as simple as you would like. I geared it toward fifth grade so they would be able to complete it in one class time period.Jacqueline Nugent

Reviews

Footer

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