

Design a Dream Bedroom Project

Name: _____

Summary:

Students will measure their bedroom (including furniture) in their homes. Students then have to create a scale drawing of their bedroom on graph paper and scale it down to the size of their shoebox rooms. Students have to use proportions, similar figures, and dimensional analysis to complete this portion of the activity. After all measurements are complete, students will build their rooms. They can paint, carpet, hardwood, etc. (Challenge: Put electricity for the bedroom by using a battery, rubber band, wire and a light bulb.)

Students will be given a scenario in which they are given \$3,000 to create their dream bedroom. They can look through catalogues/on-line to redecorate their rooms. They must stay within their budget when doing so, and will use a spreadsheet to keep track of spending. In the spreadsheet, they must include: name of the object that they are purchasing, the catalogue number, the color or size of their choice, the cost of the object, and the total amount spent. As students “buy” things from the catalogue/on-line, they enter them into their spreadsheet. The challenge is to stay within their budget!

Objectives

1. Students will measure and draw to scale.
2. Students will use math skills including finding perimeters and areas.
3. Students will learn about budgeting and tracking information in a spreadsheet.

Materials:

Hot glue guns, glue sticks, fabric scraps, colored construction or scrapbook paper, pom-poms, ribbon, Popsicle sticks, pipe cleaners, jewels, pony beads, colored pencils, crayons, rulers, scissors, etc.

Instructional Procedures:

Each student will need a shoe box brought from home. If a shoe box is unavailable, they may use any shallow type of box

1. Students will take a measuring tape and measure bedroom and furniture in their home.

Name	Length (inches)	Width (inches)	Perimeter (inches)	Area (Square inches)
Bedroom				
Bed				
Closet/Dresser				
Desk				
Chair				
Bookcase				

2. Students will use Graph paper and draw a floor plan of their bedroom and furniture in it. (Use the Graph paper given to you.)
3. To make the drawing to scale, they need to use 1/8 inch(model) to represent 1 inch(actual) (1 inch will represent 8 inches).
4. Students will need to include the measurements of each furniture and figure out the Perimeter and Area.

Rubric/Assessment: Total of 36 points

	Poor 1 point	Fair 3 points	Great 5 points
Basic Floor Plans	3 or less furniture and room/ Little effort shown	4 furniture and room / Shows some time put into the project.	5 + furniture and room/ a lot of effort and time went into construction of the floor plan.
Construction	Bedroom is constructed not using the guidelines and looks poorly done.	Bedroom is constructed following some guidelines and looks good.	Bedroom is constructed following guidelines and looks outstanding.
Room/ Furniture Dimensions	Dimensions are missing	Some dimensions present	All dimensions present
Math Operations	Large portions of Area and Perimeter incorrect/missing	All work shown. Most of Area and Perimeter calculations are correct.	All work shown. All work for Area and Perimeter is correct.
Budget/Spreadsheet	Most of the information in the spreadsheet is incorrect and does not meet the budget.	Most of the information in the spreadsheet is correct and does not go over the budget.	All the information in the spreadsheet is correct and does not go over the budget.
Presentation	The presentation is inappropriate and hard to follow. The student is unable to clearly demonstrate the connection to math.	Presentation is adequate. Student demonstrates the connection to math.	Presentation is thorough and well organized. Student demonstrates the connection to math.