

Christmas Enchanted Village Project

Due date: December 13th

Structure

Create a house (or other building in a village) to meet the following criteria;

* The volume of the structure (excluding the roof) measures somewhere between 800cm³ and 4500cm³
* The main structure is a rectangular prism, constructed from a strong plain paper bag or similar materials.
* The structure is aesthetically and/or creatively decorated
* Minimum requirements: main front door and two front windows
* Roof: front and back, sides not required (but may include). Roof can be any shape that you are confident working with: for example; triangular or rectangular or any quadrilateral shape including trapezoid.
* At least one additional feature (extra window, chimney, window box, porch etc.) is included
* Attach the following page to a side of the house

My Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ My Structure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculations

|  |  |  |
| --- | --- | --- |
| Dimensions of rectangular prism | Length = \_\_\_\_\_\_\_\_  Width = \_\_\_\_\_\_\_\_  Height = \_\_\_\_\_\_\_\_ | Total volume = |
| The area of the roof (front and back only) | Area = | My work: |
| The cost of a new roof (front and back only) at $0.20 per square cm | Cost of new roof = | My work: |
| Walking around my structure, I calculate the perimeter to = | Perimeter = | My work: |
| The front of your building needs to be painted in the Spring. | Calculate the surface area excluding windows and doors as: \_\_\_\_\_\_\_\_\_\_\_\_cm² | Calculate the cost of the paint project if the painter is charging 25c per cm² |
| I added the following improvement to my structure: \_\_\_\_\_\_\_\_\_\_\_\_\_ | The dimensions are: | Calculate the volume or area of your addition |