Christmas Enchanted Village Project

Monday 16th December is the latest new deadline if we hope to invite the younger students to see our Enchanted Village of ChristMath



Due date: December 11th

Extended to December 12th to display for Christmas concert if possible**~~In school time provided:~~**

~~Monday November 25~~~~th~~~~: 12:20 – 1:40~~

~~Tuesday November 26~~~~th~~~~: 1:00 – 1:40 6A only~~

~~Wednesday November 27~~~~th~~ ~~8:30 – 9:30~~

~~Monday December 2~~~~nd~~ ~~9:20 – 10:00~~

~~Monday December 2~~~~nd~~ ~~1:40 – 2:20 6B only~~

~~Tuesday December 3~~~~rd~~ ~~1:00 – 1:40 6A only~~

~~Wednesday December 4~~~~th~~ ~~1:00 – 1:40 6B only~~

***No additional in school time allowed due to Nativity Christmas service practices***

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 20,000cm³ and 50,000cm³
* The main structure is a rectangular prism, constructed from a strong plain paper bag or similar materials such as a box.
* 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, awning, chimney, window box, porch etc.) is included
* Attach the following page to a side of the house

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

**Calculations** (attach additional pages as required*. If work is not shown, assumption is that calculator used and therefore zero credit for that section*)

|  |  |  |
| --- | --- | --- |
| Dimensions of rectangular prism (excluding roof) | 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: \_\_\_\_\_\_\_\_\_\_\_\_\_ | My additional structure measures \_\_\_\_\_\_ cm². The contractor estimates that is will take \_\_\_\_ hours to build. | The contractor charges $40 per hour and $9 per square cm for materials. How much did it cost to add this improvement to your building? |