

Names _____

Period _____ Due Date: _____ at _____

Design Your Own Cereal Box

Objective:

In groups of three or four you will design and create your own cereal box using grid poster board. You will determine how much cardboard your cereal box uses and how much cereal your box will hold.

The work:

1. Using one piece of poster board, draw and cut out the pieces to make your cereal box.

How many pieces did you use? _____

2. Draw a design on your cereal box. You will need a name and picture that is in color.

Cereal Name _____

3. Tape together the pieces of poster board to create your cereal box.
(Remember no overlapping pieces.)

4. Calculate the amount of poster board needed for your cereal box. Show your work. (Don't forget to include units.)

5. Calculate the amount of cereal that will fit into your cereal box. Assume that your cereal is shaped into 1 inch by 1 inch cubes. Show your work. (Don't forget to include units)

Conclusion:

6. What do you think it means to find the surface area of a three-dimensional object?
7. What do you think it means to find the volume of a three-dimensional object?
8. Write a formula for Surface Area of a Rectangular Prism (Hint: what work did you do for #4?):
9. Write a formula for Volume of a Rectangular Prism (Hint: what work did you do for #5?):

Bonus Opportunity:

1. Create a cereal box using a single piece of poster board (opposed to using 6 pieces). Sketch the design here:
2. Make an ingredient and nutrition label on your cereal box. Must be original. You may be creative with your ingredients and nutrition facts.

Names _____

Score _____

/22

Cereal Box Project

Objective	4	3	2	1
Construction	Able to construct a cereal box from just one piece of cardboard and tape together to form a box with no overlapping sides	Able to construct a cereal box from multiple pieces of cardboard and tape together to form a box with no overlapping sides	Not uniform sides cut out and so doesn't form a solid box when taped together OR Overlapping sides	Pieces cut out but not taped together
Design	Creative design with color and ingredient label	Creative design with color	Creative design but no color	Design not complete
Surface Area Calculation	Correct calculation of surface area with work shown and correct units	Correct calculation of surface area but missing Work Or Units	Minor calculation errors with work shown and units	Many calculation errors
Surface Area Definition	Able to write a clear definition for surface area AND Able to write a clear formula for surface area	Able to write a clear definition for surface area OR Able to write a clear formula for surface area	Partial definition AND Partial Formula	Shows no understanding of definition or formula for surface area
Volume Calculation	Correct calculation of volume with work shown and correct units	Correct calculation of volume but missing Work Or Units	Minor calculation errors with work shown and units	Many calculation errors
Volume Definition	Able to write a clear definition for volume AND Able to write a clear formula for volume	Able to write a clear definition for volume OR Able to write a clear formula for volume	Partial definition AND Partial Formula	Shows no understanding of definition or formula for volume