3-D Measurement Cereal Project

Due Date: April 18th

"GET UP KIDDO!!! TIME FOR BREAKFAST!!!"

How many times have you heard those words as you painfully awake in the morning? And as you struggle out of bed, wobble down the stairs, and creak towards the kitchen, there you are confronted with a boring box of tasteless cereal.

Well now is your chance! No more will you methodically eat your cereal lazy eyed with the milk dripping down your chin. You have the opportunity to make breakfast fun and educational!

CREATE YOUR OWN CEREAL MATH BOX!!!!

Here's the criteria:

1. You have free reign to create whatever type of cereal you like. Design the cover of your box and make it colorful and creative.

2. Your cereal box should be demonstrative of an actual manufactured cereal box – panels should include items such as nutritional information and ingredients (particularly if you choose to create your own brand of cereal that you want me to taste test!!! I want to know what I'm eating!!)

3. Most importantly – your educational activities! On the back of the box you must include a fun instructional guide on how to calculate the **surface area** and **volume** of your cereal box. You should also inform the consumer of the geometric shape of the box, and present a sample geometric net. All measurements must be accurate and all steps shown. An answer key to the surface area and volume must be documented somewhere on your cereal box. I'm checking!

EXTRA CREDIT:
Most cereal boxes come in a standard shape (rectangular prism). If you would like to earn extra credit, you may make your cereal box a different 3D figure. (Ex. Pyramid, cylinder, cone, or create one make up of multiple 3D figures.

***Hint: I will NOT be providing formulas for your 3D cereal boxes for surface area and volume; however, you can find the formulas either in your textbook in Chapter 9, the powerpoint on Google Classroom, or on the internet. Please get in touch with me if you are struggling.

Checklist:

- ✓ creative and interesting front panel (name of cereal, pictures, etc)
- ✓ nutritional information and ingredients included (done on one side panel)
- ✓ geometric net provided (net should be drawn on the back panel)
- ✓ steps to solve the volume (done on the back panel)
- ✓ steps to solve surface area (done on the back panel)
- ✓ answers to volume and surface area provided (done on the back panel)

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Criteria	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding	Follows procedural formulas to calculate surface area and volume with limited effectiveness. Geometric net missing.	Follows procedural formulas to calculate surface area and volume with some effectiveness. Geometric net included but inaccurate.	Follows procedural formulas to calculate surface area and volume with good effectiveness. Geometric net included.	Follows procedural formulas to calculate surface area and volume with excellent effectiveness. Geometric net included and detailed.
Thinking	Selects and carries out strategies with limited effectiveness for solving multi-step problems that involve the properties of measurement.	Selects and carries out strategies with some effectiveness for solving multi-step problems that involve the properties of measurement.	Selects and carries out strategies with considerable effectiveness for solving multi-step problems that involve the properties of measurement.	Selects and carries out strategies with a high degree of effectiveness for solving multi-step problems that involve the properties of measurement.
Communication	Expresses and organizes mathematical thinking with limited effectiveness Tried with incomplete or incorrect explanations, and few required details included. Uses mathematical vocabulary and notation with limited effectiveness (e.g., expresses solutions with limited clarity)	Expresses and organizes mathematical thinking with some effectiveness Explanations are unclear or confusing, with some required details included Uses mathematical vocabulary and notation with some effectiveness (e.g., expresses solutions with some clarity)	Expresses and organizes mathematical thinking with considerable effectiveness Explanations may be slightly unclear, and most required details included Uses mathematical vocabulary & notation with considerable effectiveness (expresses solutions in a clear manner)	Expresses and organizes mathematical thinking with a high degree of effectiveness Explanations are full and clear, with all required details included Uses mathematical vocabulary & notation with a high degree of effectiveness (expresses solutions in a clear and detailed manner)
Application and Creativity	Applies knowledge and skills of surface area in a variety of contexts with limited effectiveness. Instructional guide lacks creativity and accuracy.	Applies knowledge and skills of surface area in a variety of contexts with some effectiveness. Instructional guide shows some creativity and accuracy.	Applies knowledge and skills of surface area in a variety of contexts with good effectiveness. Instructional guide is creative and accurate.	Applies knowledge and skills of surface area in a variety of contexts with excellent effectiveness and consistency. Instructional guide is extremely creative and contains no errors with accuracy.