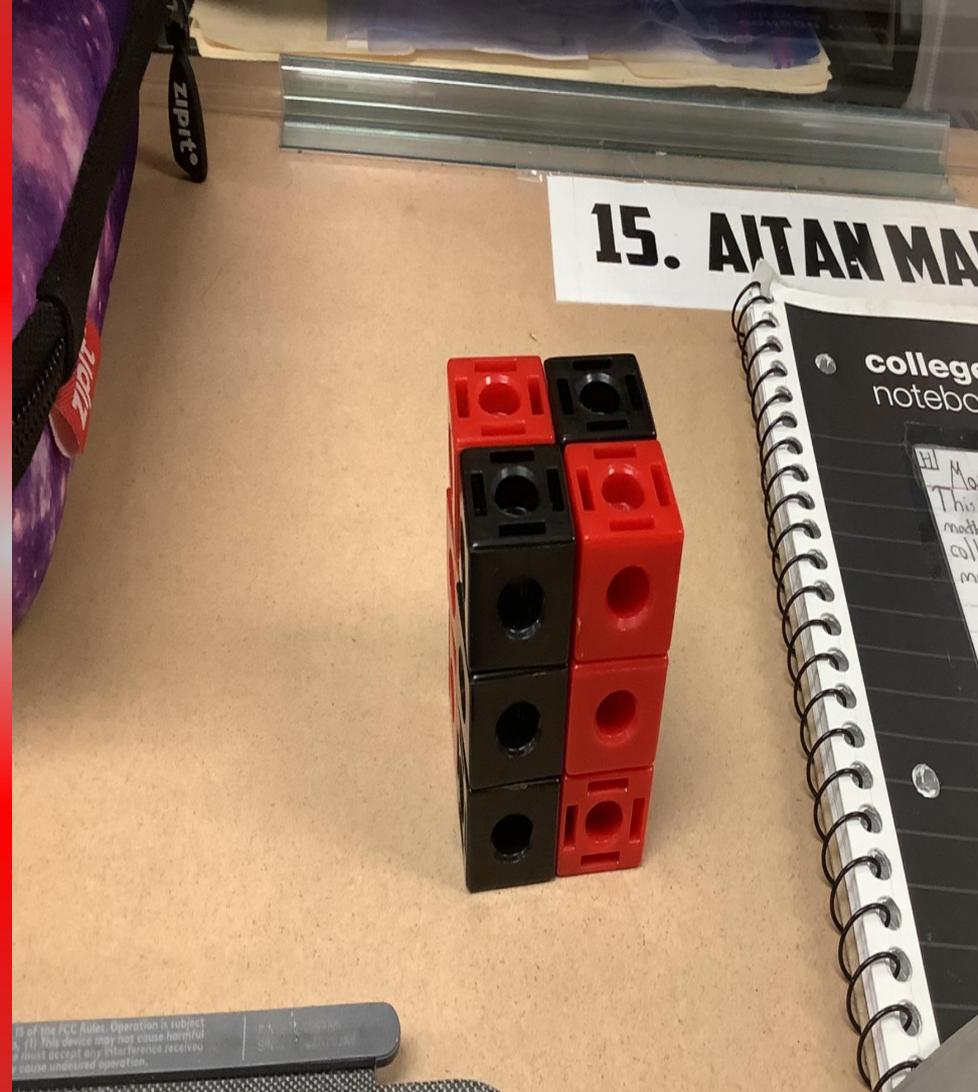


# Raspberry Chocolate Swirl Bar 12-Pack Design Proposal.

By: Aitan Martinez, and Delenio Bond

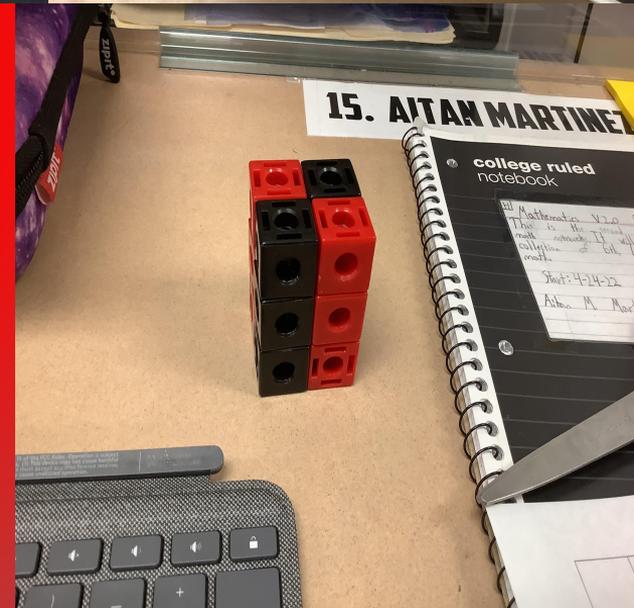
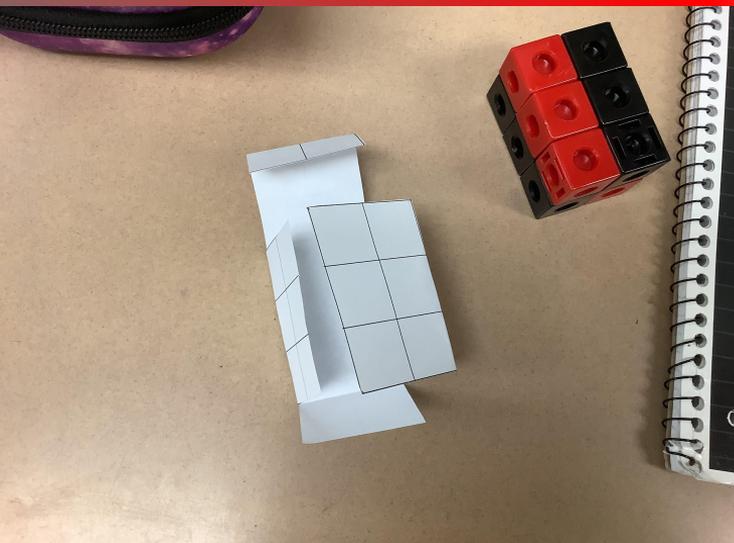
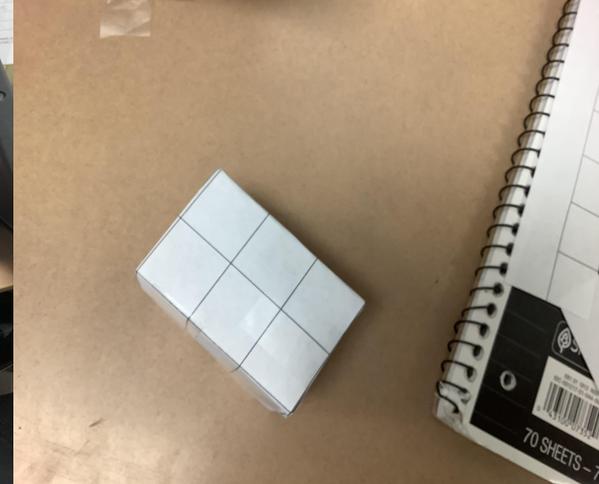
# Our delicious idea!

- We went with a 3 x 2 x 2 shape.
- Things that we focused on:
  - Stackability
  - Good design space
  - Economical advantage
  - Environmental advantage
  - Portability
  - Is it easy to eat?



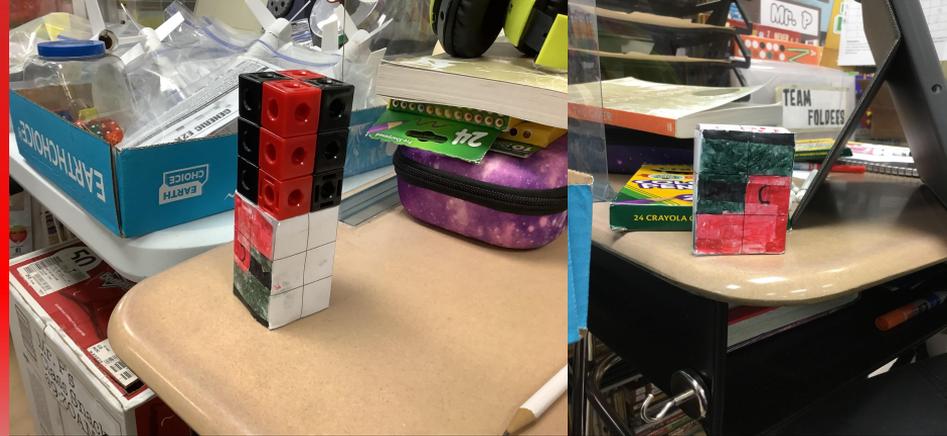
# Process

- We first compared the surface area and nets of each shape.
- Our first step was to build our candy bar.
- We went with a 3x2x2 shape.
- Then we cut out our graph sheet.
- Then we wrapped it up and taped it.
- Last but not least we designed it.



# Stackability

- Our ooey-goey candy bar is very stackable.
- When the cubes are stacked on top of each other they won't fall over unless someone knocks them over. These cubes can maintain a stable state which is important for stacking.
- It is also easily arranged in a stack.
- If someone was ordering a large quantity of Raspberry Chocolate Swirl Bars, they would want them to be easy to store and stack together.



## Good Design Space

- While this design does not have the most surface area or the widest sides for drawing, it does allow you to have 4 semi-large sides to add the company's designs, logo, and adds.
- The top and bottom allows design space and nutrition facts to be shown.



# Economical and Environmental Advantage: Math.

- Time for some simple math!
- There are 4 possible designs. (12 x 1 x 1, 3 x 4 x 1, 6 x 2 x 1, 3 x 2 x 2)
- 12 x 1 x 1 surface area = 50 sq units
- 3 x 4 x 1 surface area = 38 sq units
- 6 x 2 x 1 surface area = 40 sq units
- 3 x 2 x 2 surface area = 32 sq units
- 50 > 40 > 38 > 32.
- This shows that the 3 x 2 x 2 cube has the least surface area. Why?

## Researching Box Designs

Name Aidan

Suppose that you and your partner are box designers for the Ooey-Gooley Candy Company. Ooey-Gooley makes caramels and packages them 12 to a box in rectangular boxes that are sold in retail stores. Ooey-Gooley makes boxes with lids. The company wants you and your partner to make all the possible styles of rectangular boxes that will hold exactly 12 caramels, with no space left over. Then the two of you must select one design to recommend for Ooey-Gooley's caramels.



- Working with grid paper, make a net of each possible box. Cut it out, fold it, and tape the resulting box together.
- Use the chart to help you organize your research on the boxes.

The first row has been filled in as a sample. It shows one possible net. Can you find another?

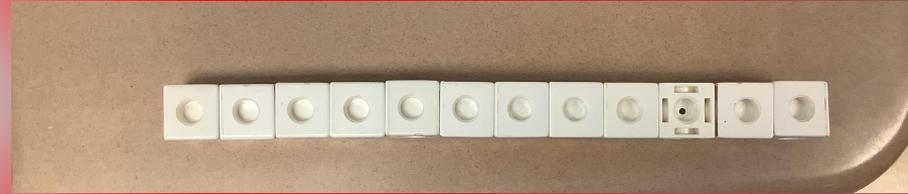
Dimensions of the box	Volume of the box	Sketch of a net of the box	Surface area of the box
12 x 1 x 1	12 cubic units		50 square units
A			
B 6x2x1	12 cubic units		40 square units
C 3x2x2	12 cubic units		32 square units
D 3x4x1	12 cubic units		36 square units

\*"Researching Box Designs" is part of the activity Wrap It Up! which has been adapted with permission from Lappan, Glenda, James T. Fey, William M. Fitzgerald, Susan N. Friel, and Elizabeth Driano Phillips, Filling and Wrapping: Three Dimensional Measurement, Connected Mathematics Program (Palo Alto, Calif.: Dale Seymour, 1998), p. 16.

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# Economical and Environmental Advantages: Why.

- Why does this shape have less surface area than the others?
- Well the main reason is that it is more compact.
- Basically this shape allows more of the faces of the chocolate and raspberry pieces to face into the shape instead of out of it.
- This means that there are less square faces facing out and less surface area even though the volume is the same.
- But why should we care.



# Economic and Environmental Advantage: Why we care.

- There are two main reasons to care about the surface area of the shape:
  - If a shape has less surface area then less wrapper will be needed to cover it. If we need less wrappers to cover it than we don't have to pay as much for the wrappers. Over time this saved money will build up and be worth a lot
  - Less surface area and less wrapper also means that when the wrapper gets thrown away there will be less trash. It is only a small bit of trash stoped but everything counts.
- This is a great deal. You can help save all of the poor creatures on this planet and save money at the same time!

Save the Planet!  
and  
Save your Money!

# Portability

- Our ooey-gooey it can fit in large size but it will take a lot of effort it can also fit in a hoodie pocket.
- It can fit in a hand like you can ball up a fist and you won't see it again.



# Is it easy to eat?

- While this shape may not be as easy to simply start eating like the 12 x 1 x 1. It wouldn't be hard to break of layers to eat.



# Conclusion

- It has great stackability.
- It has great design wrapper and candy bar both decorated good.
- It also has good economical and Environmental advantage.
- It great portability and can fit in someone's hand can fit in a pocket but it will stick out like in pants pockets but in a hoodie it fits good in there.
- For you to eat it you would have to break off parts to eat it.

# Thank You!

This presentation was brought to you by: Delenio Bond, and Aitan Martinez  
Any Questions?