Engineering Virtual Learning

HS Intro to Engineering Design Lesson #24

May 7, 2020

Objective/Learning Target:

Students will use their knowledge of Visual Design Principles and Elements to Reverse Engineer a fast food item.

Bell-Work:

What if you are home craving a Big Mac, but you have no way to get one. Watch these videos and imagine you are creating your own…

https://www.youtube.com/watch?v=S5FKKZLnJJA

https://www.youtube.com/watch?v=kVAfrY2-VrM&t=389s

Wow, I can taste that special sauce right now!

Learning Practice: Reverse Engineeing

Reverse Engineering your favorite fast food:
Select a fast food that you love. Using what you know about reverse engineering, Create a plan to duplicate the item at home.

Reverse Engineering Activity Steps:
Disassemble and Record each part of the food item in the parts list chart on the next page. You may have to research you item to get the recipe for success and estimate quantity of parts.
Product Analysis
Describe the good and bad characteristics of the recipe design and make suggestions for improvements.

Prepare a Recipe Card (3 x 5 notecard) for your food item so someone could make it at home:
(answer these questions on the back of the recipe card)
What is appealing about the original product that makes you like it?
What changes did you make allowing you to make the product at home?
How does your product compare to the original?

Prepare you reverse engineered fast food item and have your family sample it. Did they like it?

List all parts during disassembly:

Item	Quantity	Name	Description	Material
1				

Learning Resource Links:

Reverse Engineering:

https://www.youtube.com/watch?v=DDI0mEsPsQk (PLTW)
https://www.youtube.com/watch?v=TOS2cyhMjY4 (ethics)

Design Principles:

https://www.youtube.com/watch?v=ZK86XQ1iFVs

Design Elements:

https://www.youtube.com/watch?v=JfViOv77pfQ (PLTW)
https://www.youtube.com/watch?v=JZD_3zp7v2A

Grid and Isometric Graph paper:

https://www.printablepaper.net/category/isometric_graph