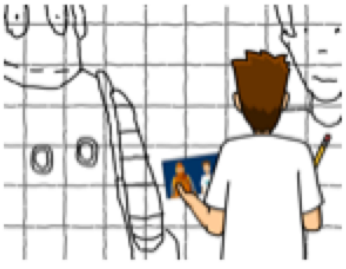
Unit 2 Project: Research and Design a Project

October 25, 2018



Unit 2 Project: Research and Design a Product

Due Date: Oct 25th, 2018

Ever had the desire to create your own product? Whether it was a video console, phone, guitar, car, etc. This project presents the opportunity to use your graphical and drawing skills to create a product that is fits our society's desires. Using your interest/hobby as your inspiration, you will design a product that is a scale model. Your project will include a graph representing the data for the given category with it's corresponding questions answered, two drawings of your product with its measurements and scale included, an explanation as to why you create your product, and all your calculations used to complete this project.

START TO PLAN

To start your project, you will need to pick a given category based off of your interests. Next you will create a graph that best represents the data given towards your category, and answer questions regarding your graph. Then you will need to research the dimensions of a product that fits within the category given. You may choose to alter your dimensions slightly depending on the look of your product. If you own this type of product at home, you may measure it to get your measurements needed.

To find your scale dimensions, you will need to take a photo from online of a product similar to yours. Then measure the product within the photo to solve for the scale needed for your specific product. Make a sketch of your product. Using your scale, label the sketch with measurements your product will have, for example, height, length, width, diameter, etc. Finally you may decide on the materials and colour scheme you will use to make your product, and represent this in your drawing (optional).

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PROJECT CHECKLIST:
Your final project will include:

- ☐ The graph given with:
  - ☐ Answers to the corresponding questions
- ☐ Research the dimensions of a product similar to yours, and print off a picture
  - ☐ Measure and label its dimensions, using a ruler.
  - ☐ Determine the scale of the object
- ☐ Draw one two-dimensional diagram (view or component diagrams) and one three-dimensional diagram (one-point perspective or isometric) of your product.
  - ☐ Measure your model dimensions and label.
  - ☐ Use your scale to figure out the actual dimensions of your own product
- ☐ Brief explanation of your product
- ☐ Your calculations for finding the scale and dimensions of your product

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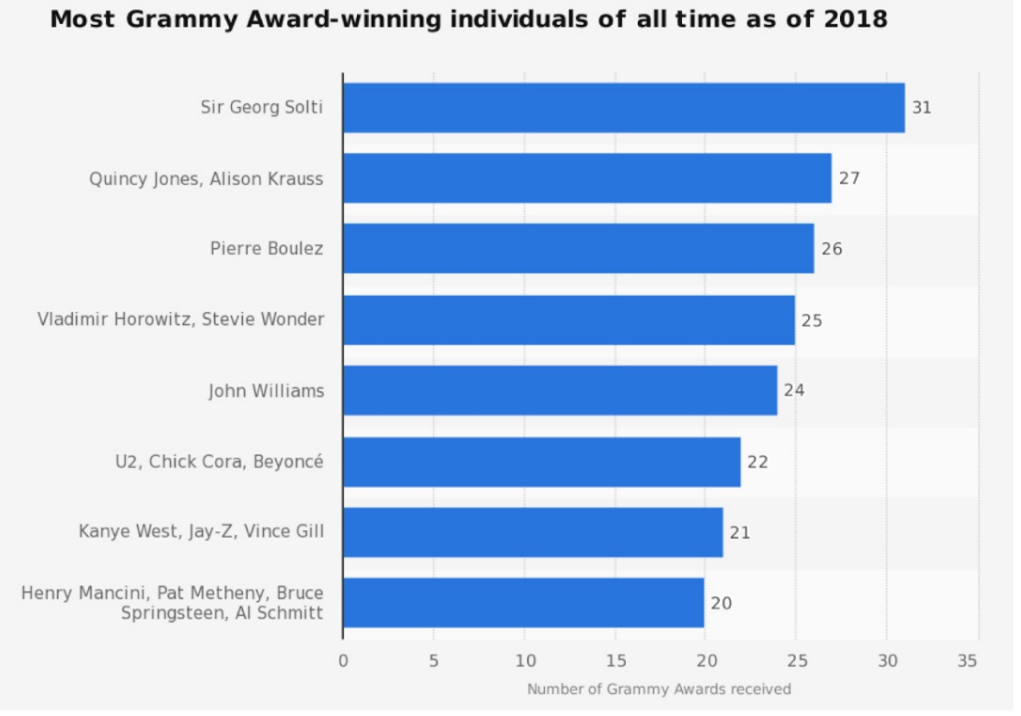
Unit 2 Project Topic: Music



1) Who had the most Grammys? How many did they have?

2) Who had the least amount of Grammys? How many did they have?

3) What is the overall trend of the graph? Explain your answer.

4) Do you know all the musicians on the list? If no, who don't you know? Research what genre or type of music they play, for only **two** of the musicians you don't know. List them below.
   1)

   2)

5) Recreate this graph as a **horizontal bar graph**.

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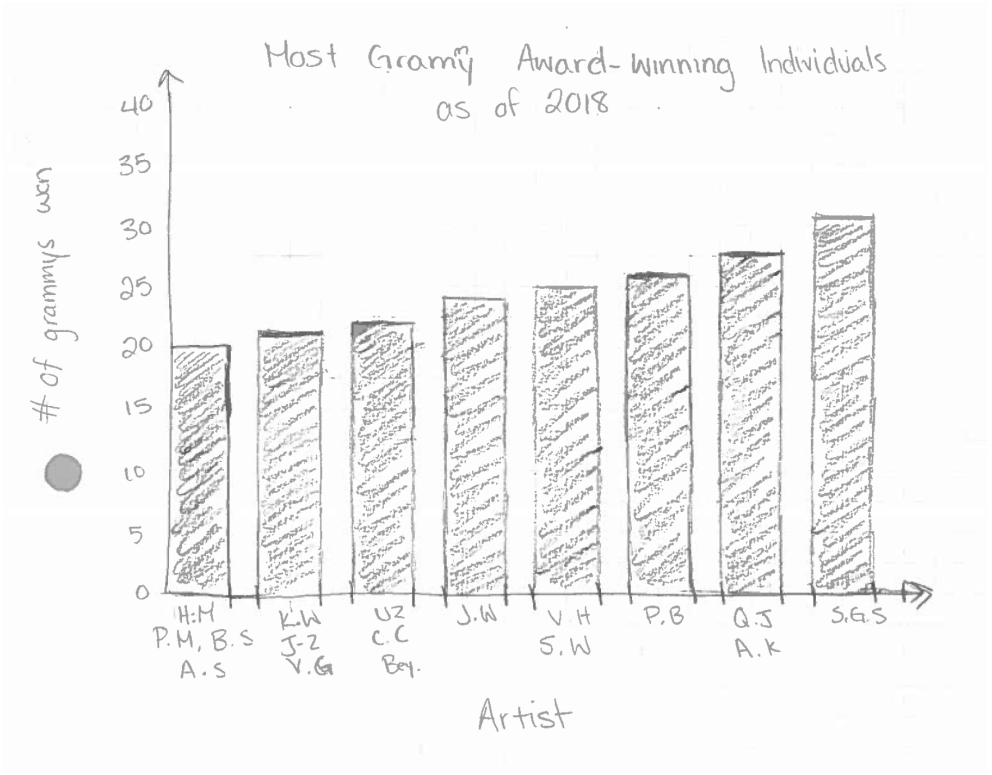
Your final project will include:

- ☐ The graph given with:
  - ☐ Answers to the corresponding questions



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TASK: For this project, you are tasked by Stevie Wonder to create an **instrument** that he will be able to use on tour. Then after his last tour, it will be showcased at the Museum of Pop Culture in Seattle. Be sure that the instrument aligns with the type of music he plays. When you've created the perfect instrument for Stevie Wonder, be sure to explain the decisions you made down below.

Drawings must include:

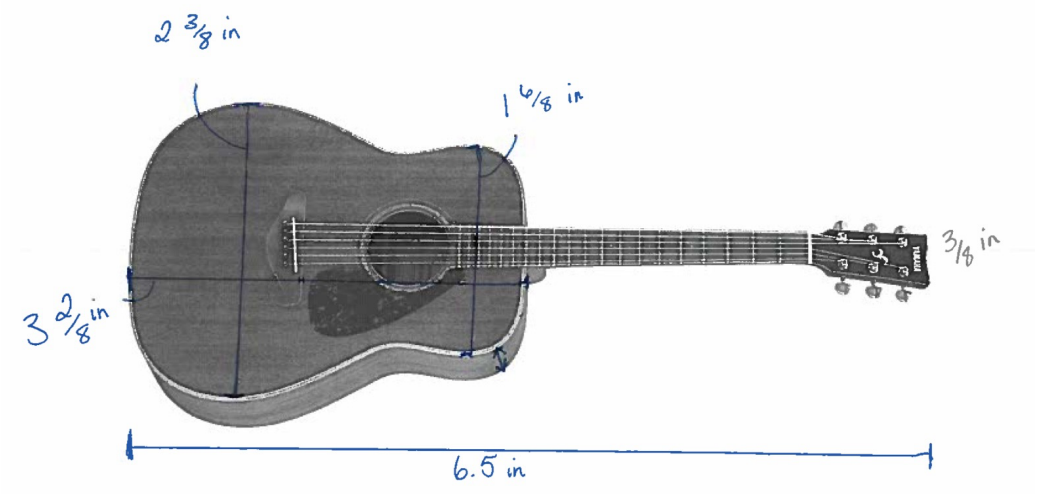
An image with its measurements included: Model measurements of a picture from the internet similar to your product. Actual measurements of a product similar to yours. Find your scale using those measurements. Draw your image, and measure its model measurements. Finally use the scale to find the actual measurements of your final product. SHOW YOUR WORK.

Explanation:

*(Your explanation **must** answer the following questions: What Genre Does He Play? What Instruments does he play (ie. guitar, saxophone, trumpet, drums, etc.)? Why Did You Choose to Create that Type of Instrument? What are some Features of Your Instrument? What benefits do those features have? He'll be going on tour, so is the instrument easy to transport from location to location? Why or why not?)*

☐ Research the dimensions of a product similar to yours, and print off a picture

☐ Measure and label its dimensions, using a ruler.



Actual dimensions of an average guitar:

Total length: **106.0 cm** (41 3/4") Body length: **52.0 cm** (20 1/2") Body width - upper bout: **30.0 cm** (11 3/4") Body width - waist: **24.5 cm** (9 5/8") Body depth: **10.2 cm** (4")

Model dimensions

Length = 6.5 in

Upper body = 2 3/8 in

Body length = 3 2/8 in = 3 1/4 in

Lower body = 1 3/4 in

☐ Determine the scale of the object

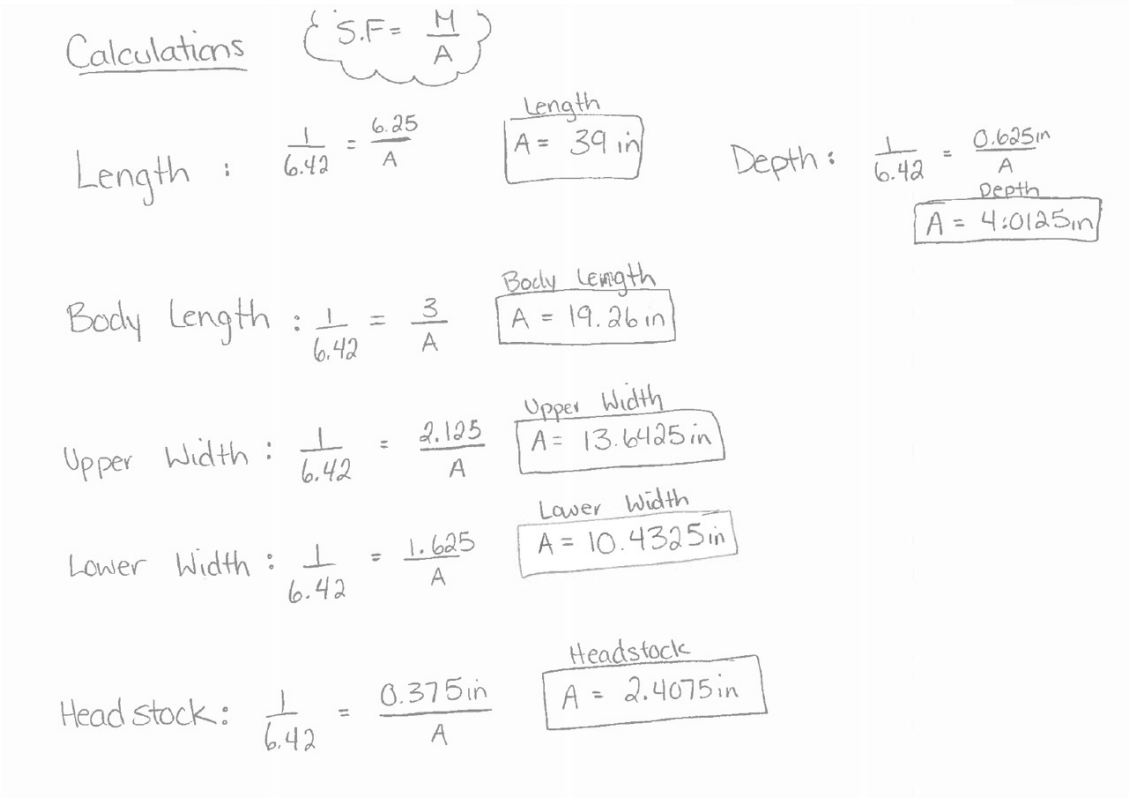
Scale

$$S.F = \frac{M}{A} = \frac{6.5in}{41.75in} = \frac{1in}{6.42in}$$

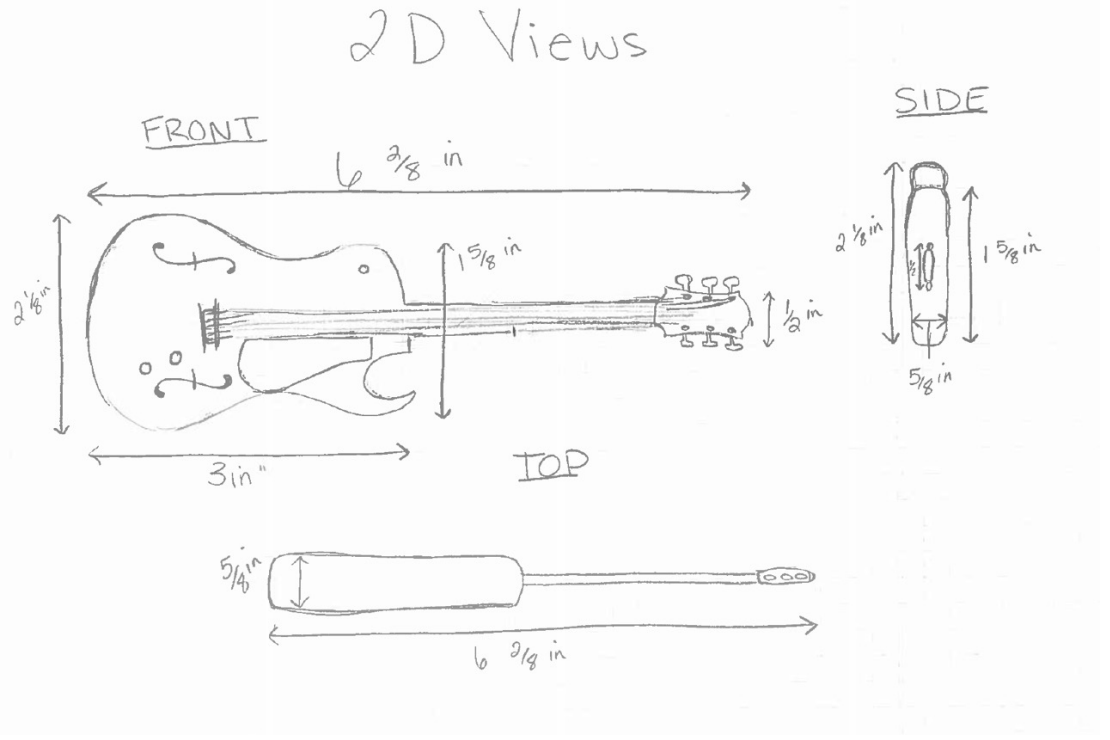
S.F = 1 : 6.42

use this to find your products actual dimensions

- ☐ Use your scale to figure out the actual dimensions of your own product
- ☐ Your calculations for finding the scale and dimensions of your product



- ☐ Draw one two-dimensional diagram (view or component diagrams) and one three-dimensional diagram (one-point perspective or isometric) of your product.
  - ☐ Measure your model dimensions and label.



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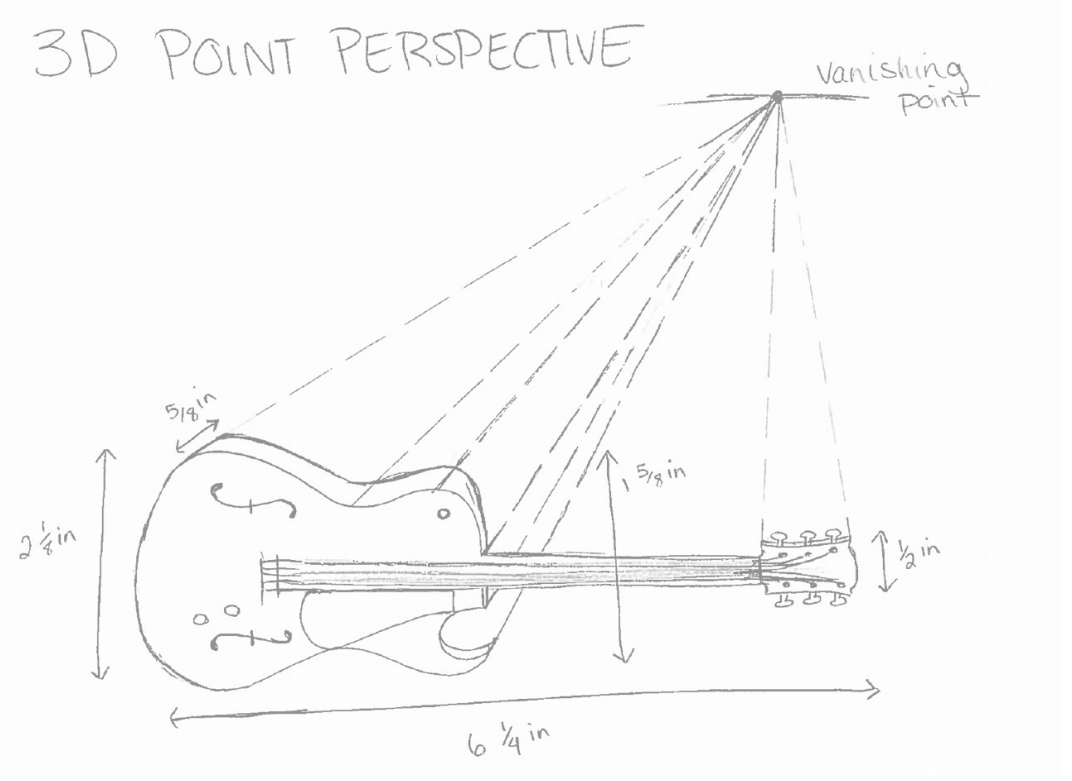

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LAST STEP

- ☐ Brief explanation of your product

Answering the questions attached to the graph given