

DESIGN to

D I S P L A Y

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DESIGN to DISPLAY

You are going to learn how to create a design for the laser cutter using the digital drawing program **Gravit Designer**.

TODAY you will:

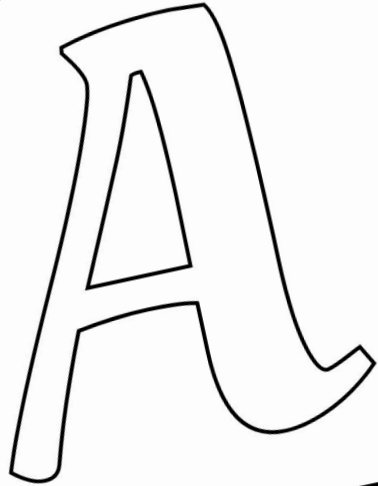
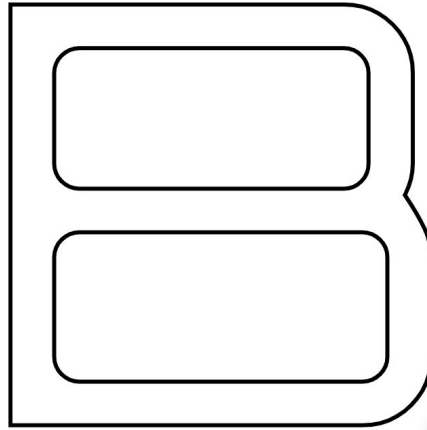
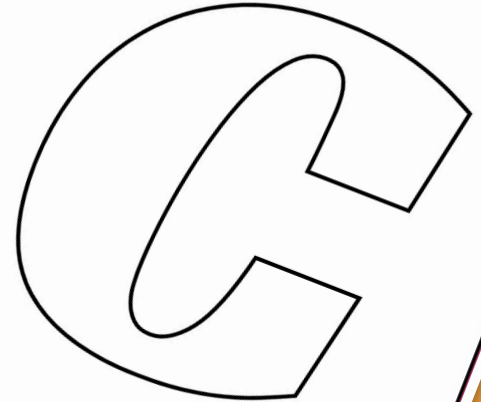
1. **Design** - choose a font to use for your first initial
2. **Prepare** - save your files in a format ready for laser cutting

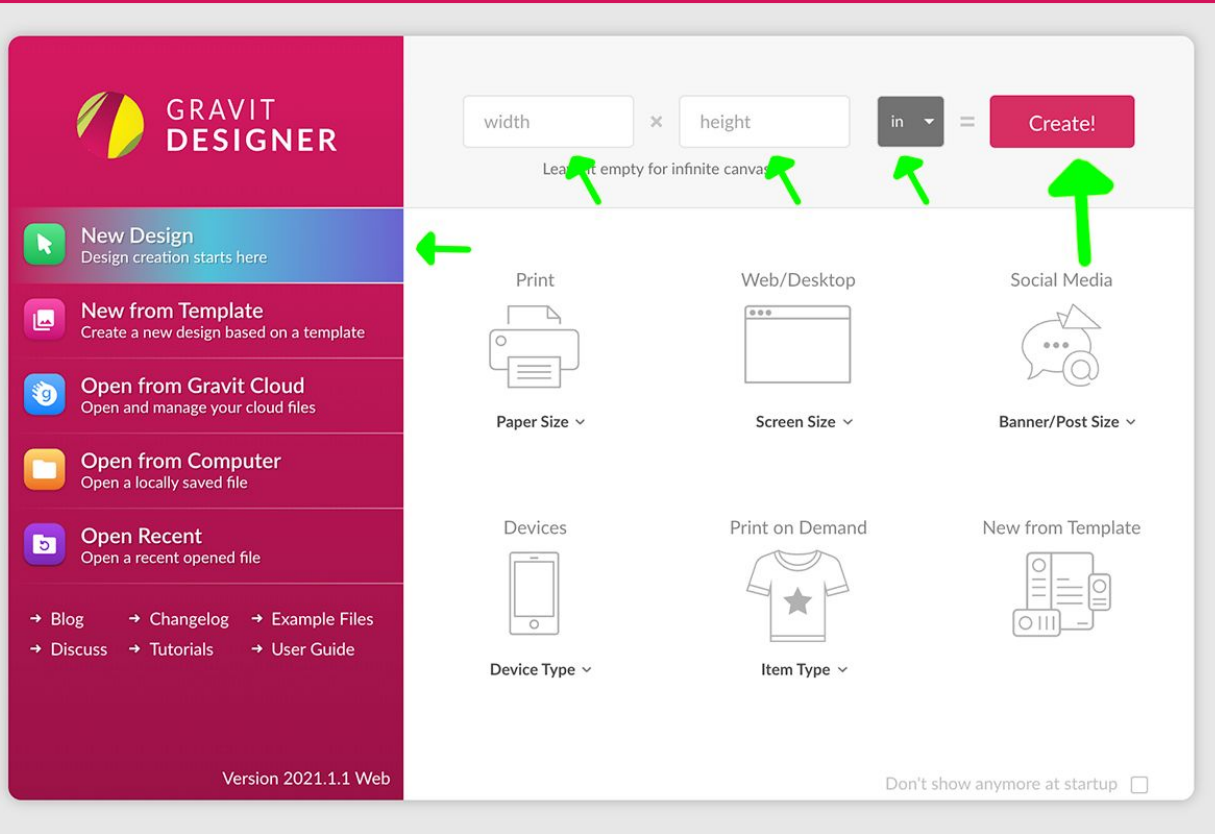
NEXT CLASS you will:

3. **Fabricate** - you will see your letter being cut on the laser cutter, then you will add color and glue your letter to your tile
4. **Display** - create a collaborative bar chart

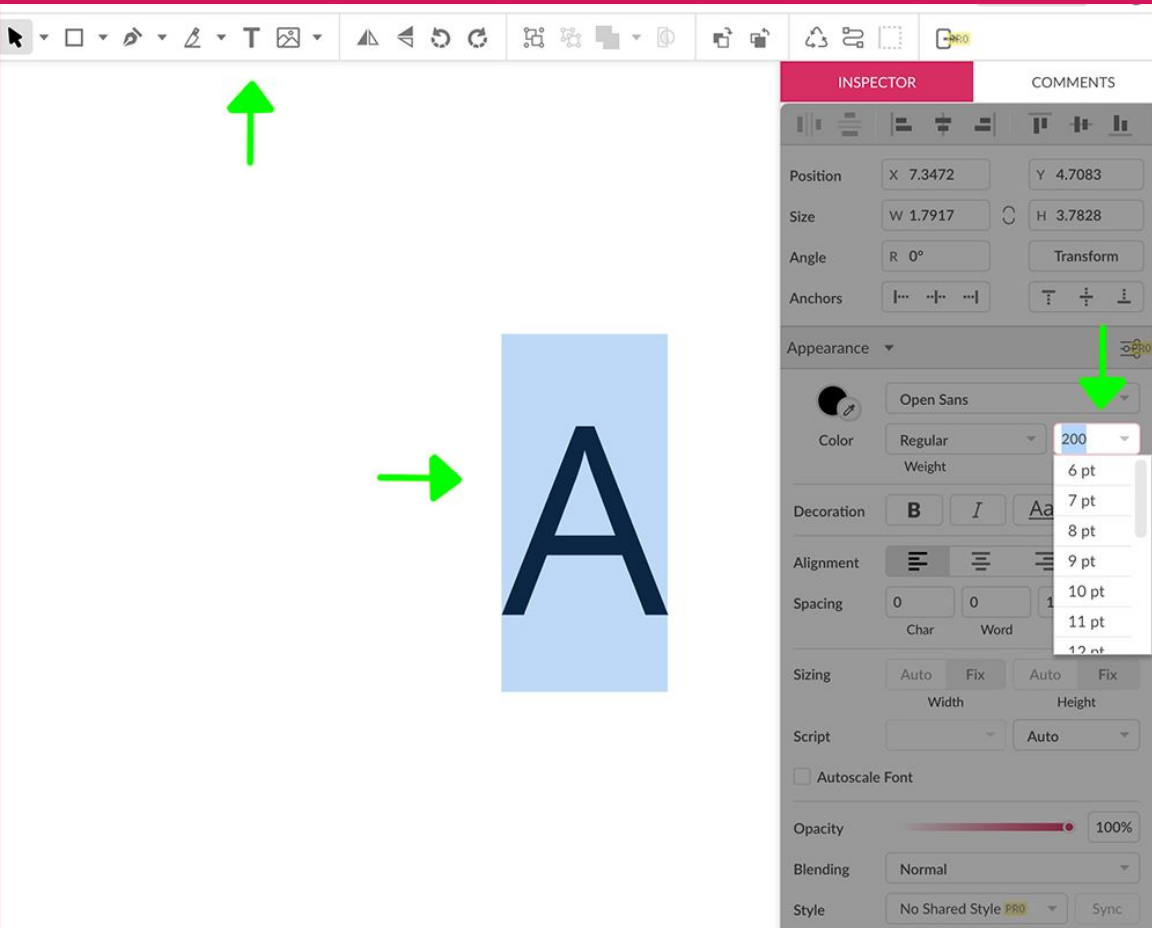
DESIGN

You will design the first letter of your first name by choosing a font in Gravit Designer. Once you have a font you like, you will turn the letter into a vector shape. You will then resize that letter so that it fits in a 2 inch square.

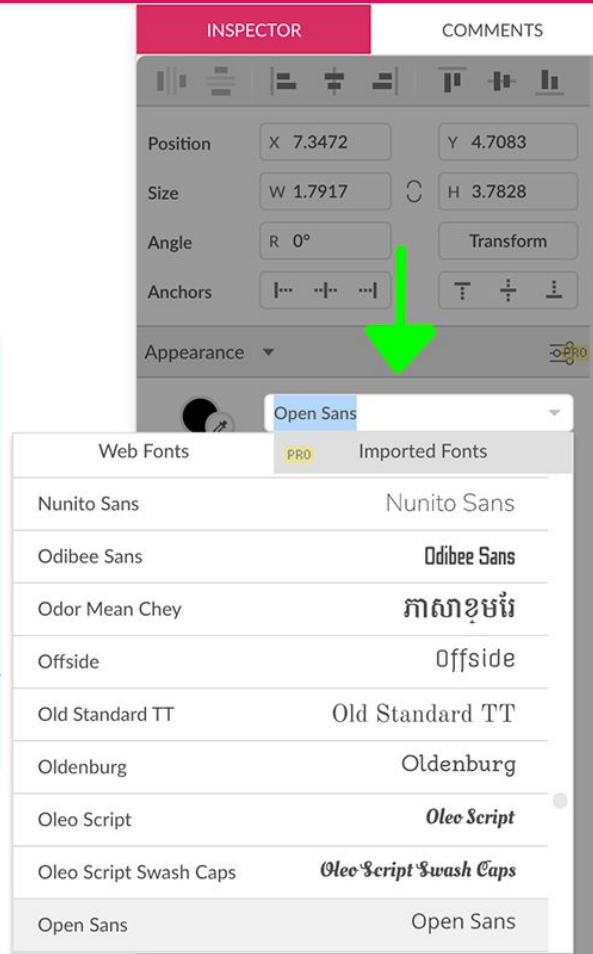
A white card with a black outline of the letter 'A' on an orange background. The card is tilted slightly to the right.A white card with a black outline of the letter 'B' on an orange background. The card is centered and slightly tilted.A white card with a black outline of the letter 'C' on an orange background. The card is tilted to the right.



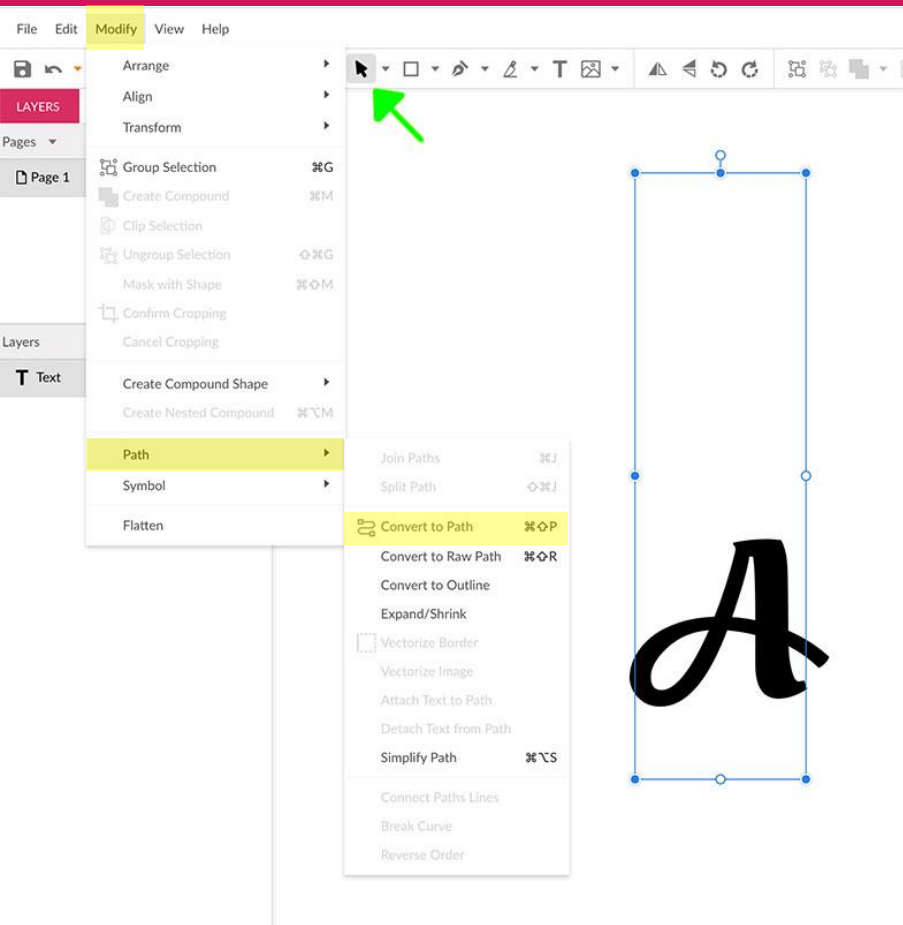
- Open Gravit Designer
- Choose “New Design”
- Leave dimensions blank
- Change the measurement drop-down to inches (in)
- Click on “Create”



- Choose the type tool
- Click on the design space
- Type the first letter of your first name
- Double click to highlight
- In the inspector panel on the right, under appearance, type “200” in the size box and hit the enter/return key.

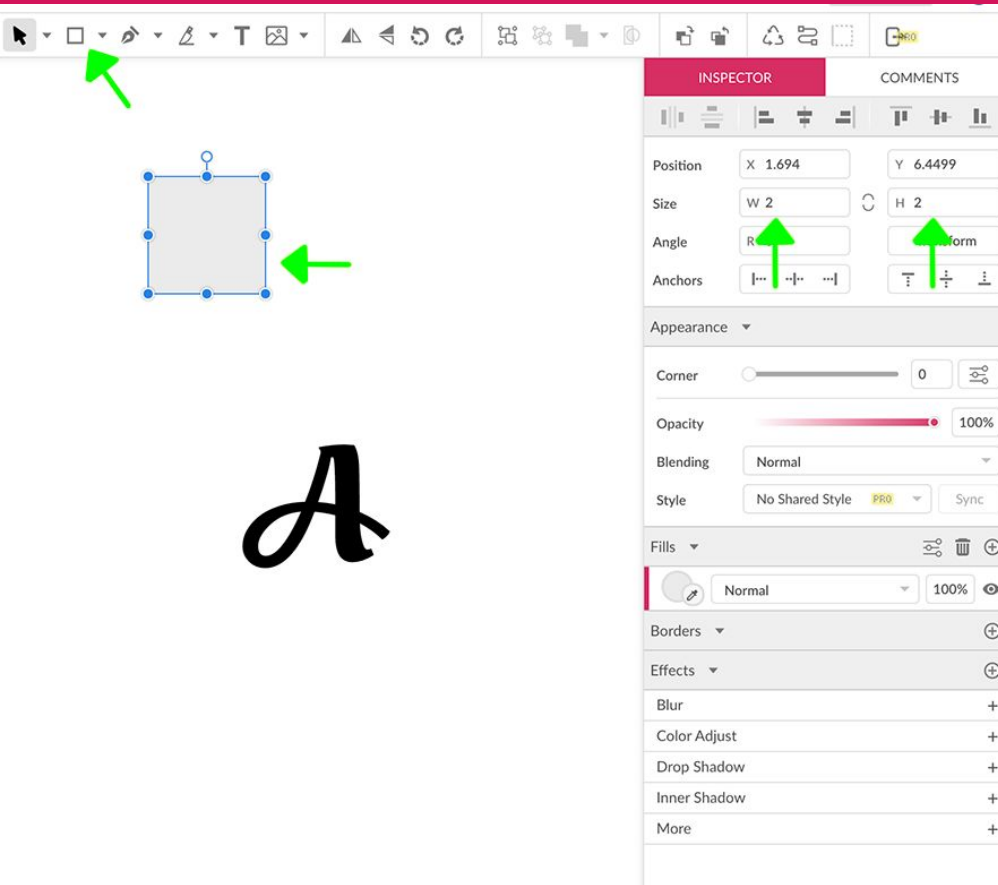


- Click on the font name drop-down box and try out as many fonts as you like
- Decide on your favorite font.



Convert your letter to a vector shape

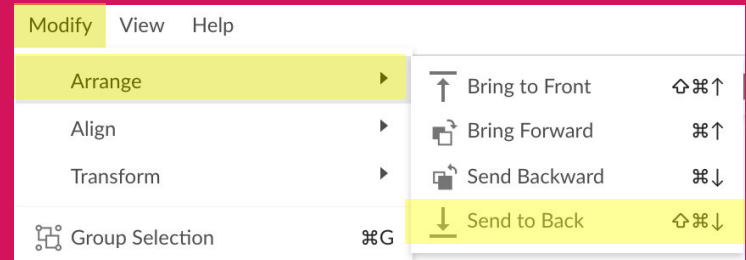
- Select black arrow tool and click on your letter
- Then go to the modify menu at the top of the page
- Navigate to Modify > Path > Convert to Path

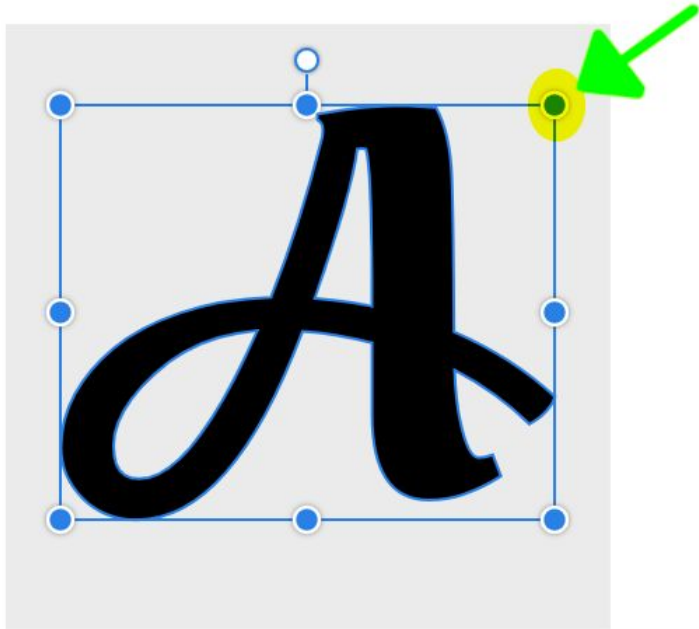


Draw a 2 inch square box

- Select the rectangle tool
- Click and drag the mouse in the design area to create a box
- Change the size of the box by changing the width and height to 2

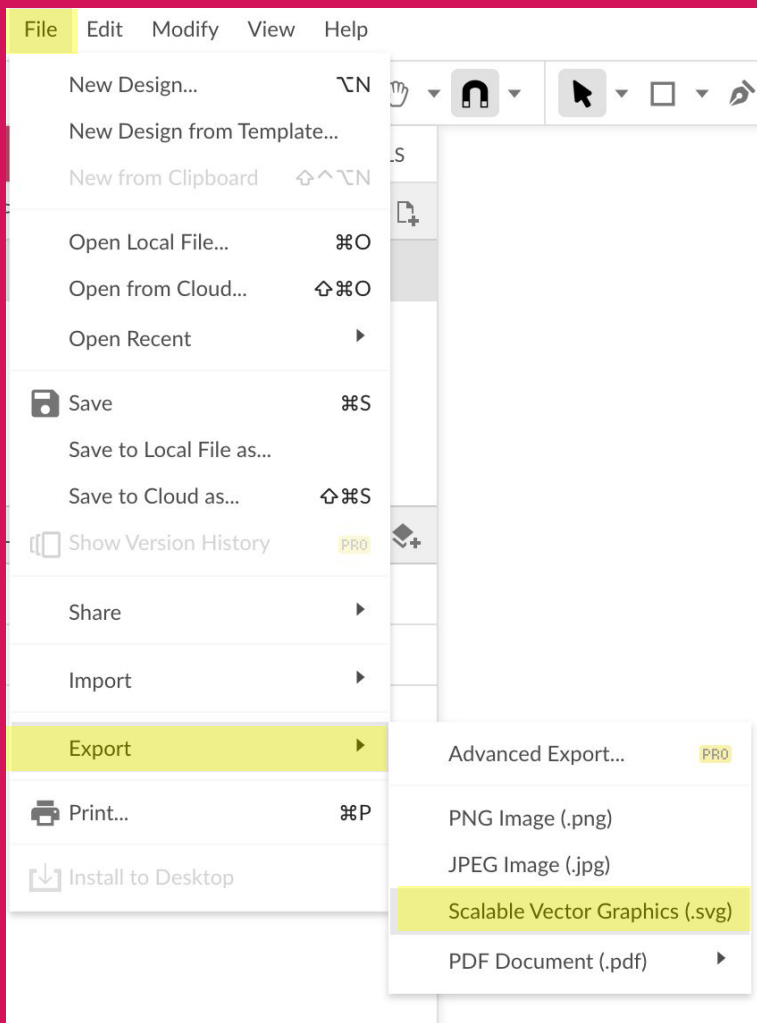
Send the box to the back by selecting **Modify > Arrange > Send to Back**





Resize letter to fit in box

- Select the black arrow tool
- Click on your letter and drag it to place it on top of your box
- Resize it so that it fits comfortably in the box by holding down the “shift” key and clicking and dragging one of the corner handles

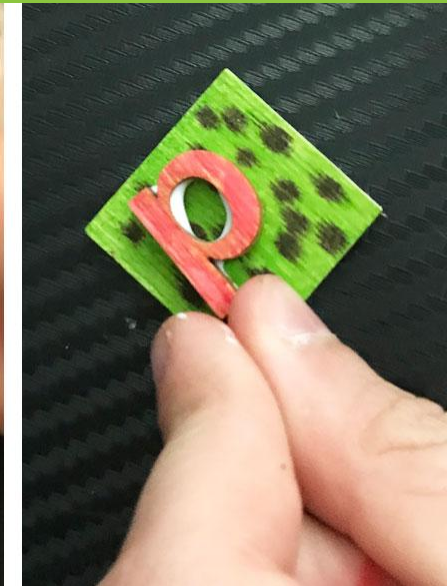
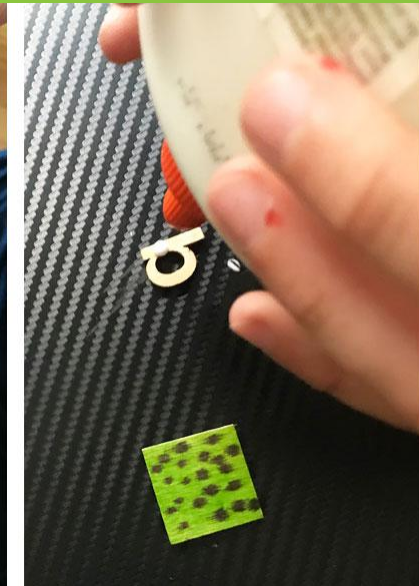
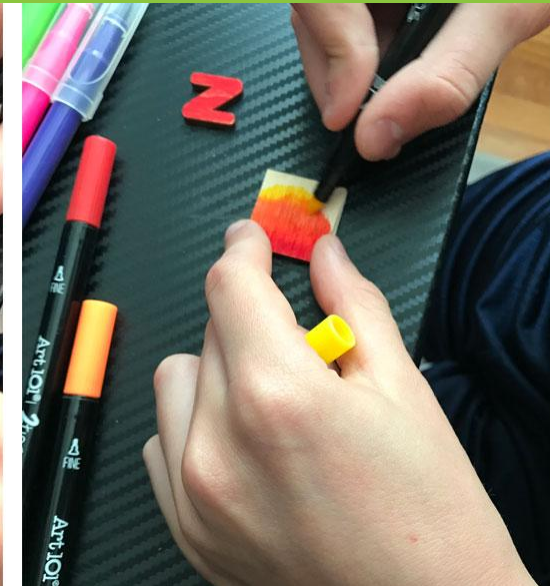


Save your file as a .svg

- Go to the top menu
- Navigate to File > Export > Scalable Vector Graphics (svg)
- Save your files on the desktop in the folder named “Student Files”
- Name your file as your first name + the .svg file extension. *Example* my file name would be “audra.svg”

FABRICATE

We will have a laser cutting demo, and you will be able to watch your file being cut. Once your letter and square tile has been removed from the laser cutter, use markers to add color to them. Be as creative as you want, but make sure to use contrasting colors in your letter and tile, so that the letter will stand out from the background. Glue your letter to your tile.





DISPLAY

Work together to create a collaborative bar chart. Place your own square on the larger graph paper.

Each vertical bar on the chart will correspond to a letter in the alphabet. Make sure to leave space between each bar.

From left to right, letters should be arranged in alphabetical order.

Label the x axis with letters.

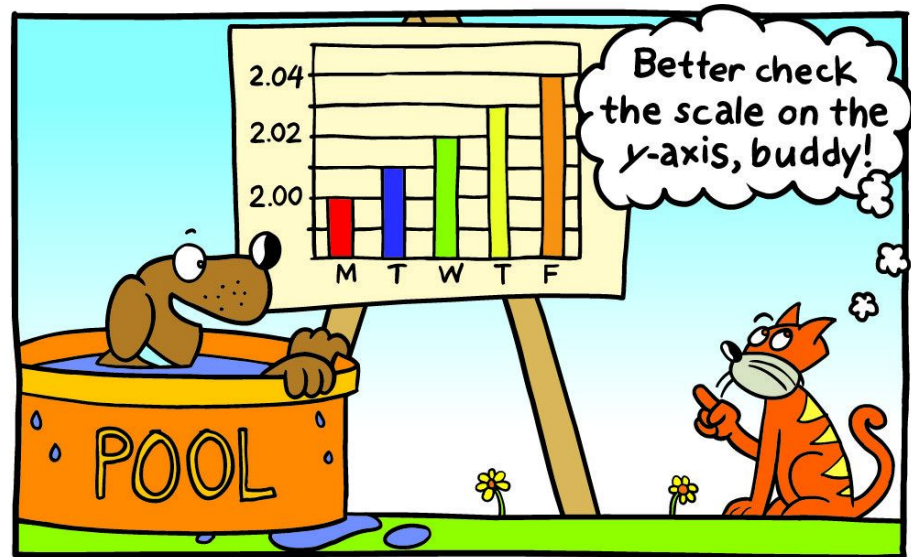
Label the y axis with numbers.

Once the bar chart is complete, each student will glue their own letter down.

OBSERVE

What information can you gather by looking at the chart we created?

Make a list of some of the observations.



"Wow. The number of minutes I can dog paddle is growing like crazy!"

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