Tutorial Instructions

Make sure that you have downloaded and installed Google's **Chrome** browser on your device. Launch **Chrome** and enter the following URL for the JupyterHub server on Mane Frame II:

https://jupyter.m2.smu.edu

Enter your login Credentials and click the green My Server button, this will take to your home folder on m2. You should have a *scratch* folder, this is where you will be able to edit and save your notebooks.

The Tutorial notebook can be found at the following link:

http://www.physics.smu.edu/rguarino/labmechsp18/Jupyter_Tutorial.ipynb

Follow the link, download a copy to your device and note is location you will need this for the next steps.

Next upload a copy to your *scratch* folder. Click the upload button on the upper right of the screen and navigate to the notebook file that you just downloaded to your machine. The notebook will now appear in your file list with a blue Upload button. Click the button.

To begin the exercise, select Jupyter_Tutorial.ipynb from the file list and *"Run All Cells"*.

There are six headings.

Double click the left side of the **Formatted Text** heading and enter the following:

Classic Egg Salad Recipe

This Classic Egg Salad Recipe is a classic that's great for sandwiches for lunch and dinner all year long.
Course: Main
Servings: 6 -8
Author: The Gracious Wife

Ingredients

- 1 dozen eggs
- 1/4 cup finely chopped red onion
- 1 stalk celery finely chopped
- 1/2 cup mayo
- 2 tablespoons yellow mustard
- 1 tablespoon dill pickle relish
- Salt & pepper

- Bread for sandwiches

Instructions

1. Place eggs in a large pot and cover with water.
2. Place on stove over high heat. Bring water to a hard boil and allow to cook for 1 minute.
3. Cover the pot. Remove from heat, and allow the eggs to sit in the hot water for 20 minutes.
4. After 20 minutes, dump out the hot water and refill the pot with the eggs with cold water. Allow to sit for 5 minutes
5. Crack and peel the eggs. Refrigerate for at least 3 hours until cold.
6. When the eggs are cold, finely chop them with a knife or egg slicer and place in a large mixing bowl.
7. Add onion and celery and toss to combine.
8. Add mayo, mustard, and relish and stir gently until all ingredients are incorporated.
9. Add salt and pepper to taste.
10. Spread the egg mixture onto bread to make sandwiches.

Double click the left side of the **Equation** heading and enter the following:

$K = \frac{1}{2} m v^2$ where the uncertainty in m and v are respectively Δm and Δv.

The uncertainty in K is given by the following expression:

$$\Delta K = K \sqrt{\left(\frac{\Delta m}{m}\right)^2 + \left(2 \frac{\Delta v}{v}\right)^2}$$
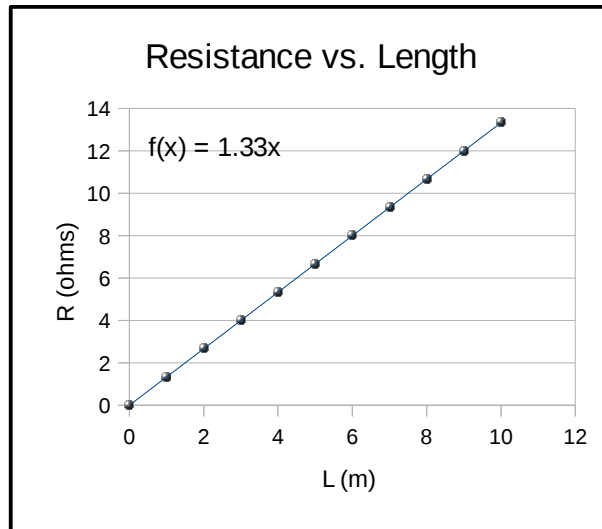
Double click the left side of the **Table** heading and enter the following:

Create the Table below in a spreadsheet and put it in the **Table** markdown cell.

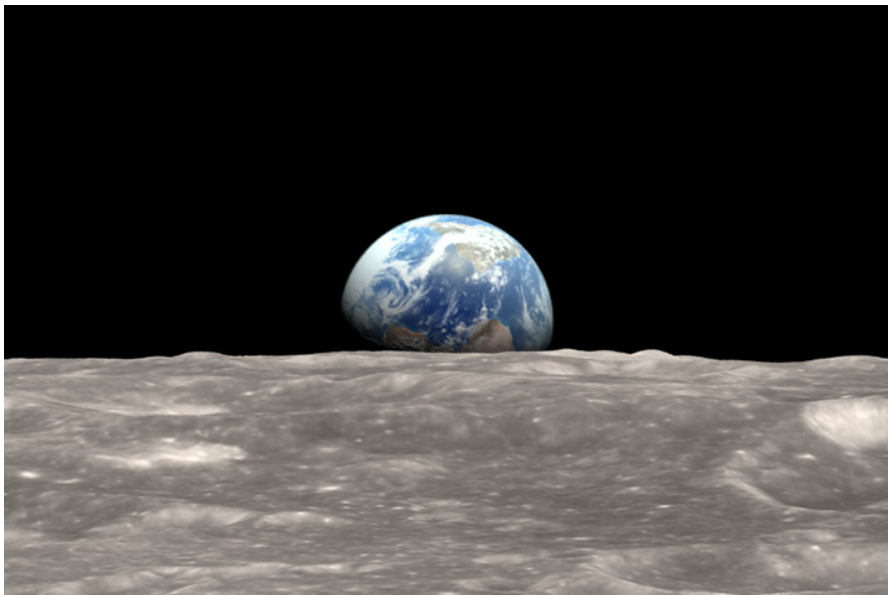| L(m)	V(volts)	R(Ω)	ΔR(Ω)
0	0	0	0
1	1.0	1.3	0.7
2	2.0	2.7	0.7
3	3.0	4.0	0.7
4	4.0	5.3	0.7
5	5.0	6.7	0.7
6	6.0	8.0	0.7
7	7.0	9.3	0.7
8	8.0	10.7	0.7
9	9.0	12.0	0.7
10	10.0	13.3	0.7

<u>Double click the left side of the **Graph** heading and enter the following:</u>

Using the table above, create the Graph below in a spreadsheet and put it in the **Graph** markdown cell.

Resistance vs. Length
$f(x) = 1.33x$
R (ohms)
L (m)

<u>Double click the left side of the **Picture** heading and enter the following:</u>

Using the this URL , (http://www.physics.smu.edu/rguarino/labmechsp18/Earthrise-over-Moon.jpg) *put the picture of"Earthrise over Moon"* in the **Picture** markdown cell.

<u>Double click the left side of the **Sketch** heading and enter the following:</u>

Draw a sketch of a rocket ship.   Take a picture with your phone and put the sketch in the **Sketch** markdown cell.

<u>Convert to PDF</u>

File → Save and Checkpoint
Ctrl-P
Select Print and print to PDF
Upload PDF to Canvas.