GSSF
Meeting 5

Updates

- Background research is off to a good start
- Include definitions of key words
- Presenting using a graphic or chart rather than text
- Avoid plagiarism and AI, summarize everything in your own words
- Ask yourself, can I say this with less words or detail

Results

- Summarize your data with easy to understand numbers
- Numbers should communicate relevant information
- Consider using averages from a group of trials when comparing treatments
- Other options: percentages, special formulas
- Make sure you know how you are analyzing your data

Average calculation example

- How would you calculate the average size (cm) for the coffee treatment?

Table 2. Sizes were lower in bottles with coffee compared to control bottles with only water.

Bottle	Treatment	Size (cm)
1	coffee	9
2	coffee	8
3	coffee	7
4	water	14
5	water	16
6	water	13

Average calculation example

- How would you calculate the average size (cm) for the coffee treatment?

1. Add up numbers (9+8+7)=24
2. Divide by number of replicates 3
3. 24 3 = 8

Table 2. Sizes were lower in bottles with coffee compared to control bottles with only water.

Bottle	Treatment	Size (cm)
1	coffee	9
2	coffee	8
3	coffee	7
4	water	14
5	water	16
6	water	13

Average calculation example

- How would you calculate the average size (cm) for the water treatment?

1. Add up numbers (14+16+13)=43
2. Divide by number of replicates 3
3. 43 3 = 14.33

Table 2. Sizes were lower in bottles with coffee compared to control bottles with only water.

Bottle	Treatment	Size (cm)
1	coffee	9
2	coffee	8
3	coffee	7
4	water	14
5	water	16
6	water	13

Tables

- Tables help you organize your numbers so they are easy to read

Table 2. Sizes were lower in bottles with coffee compared to control bottles with only water.

Bottle	Treatment	Size (cm)
1	coffee	9
2	coffee	8
3	coffee	7
4	water	14
5	water	16
6	water	13

1. All tables need a description (and a number if more than 1).

The description goes ABOVE the table.

2. Make sure to include labels and units for data collected

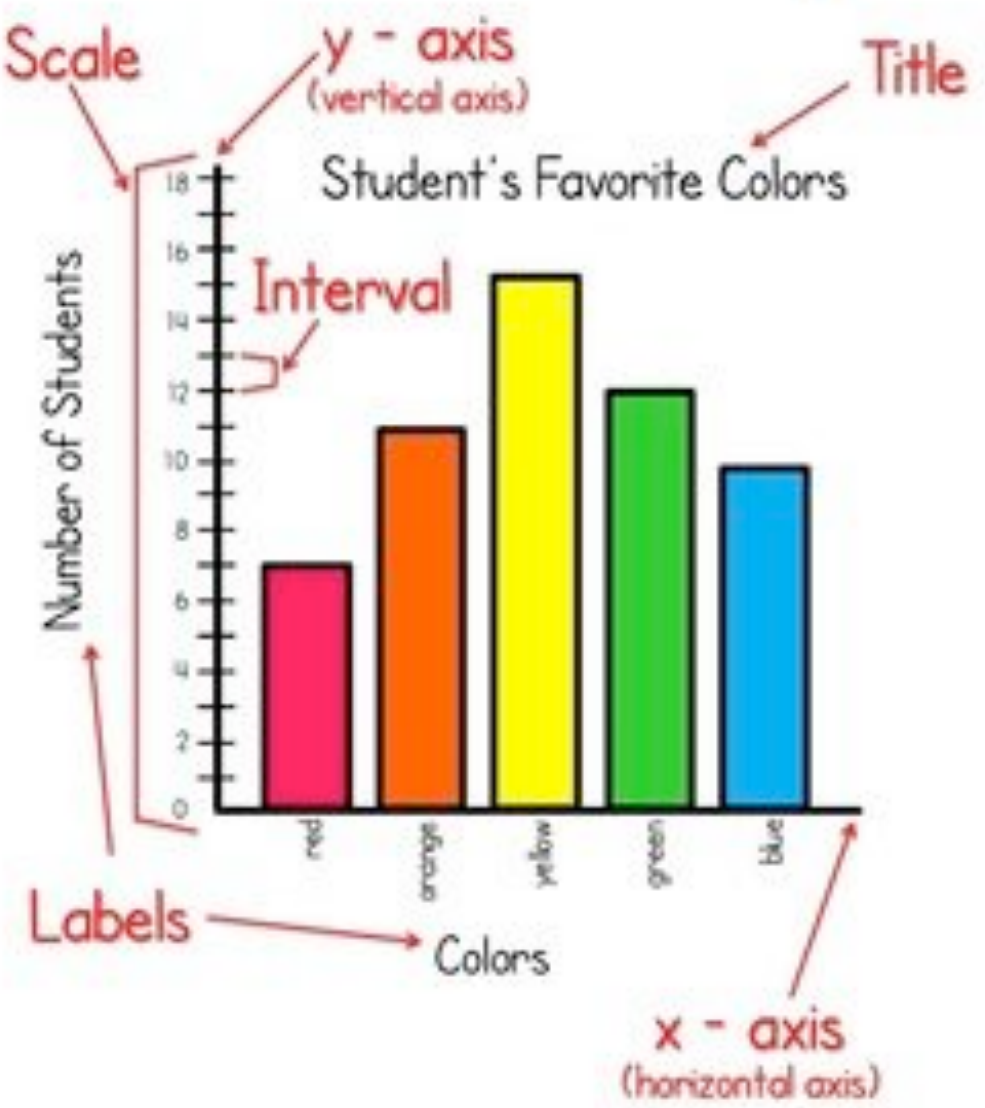
DATA

Trial	Brand X – number of chips in 3 cookies.	Brand Y – number of chips in 3 cookies
1	14	16
2	16	17
3	17	18
4	21	16
5	8	14
total number	76	81
number per cookie	15.2	17.2

Graphs

- Graphs visually show your information
- Your independent variable goes on the x-axis and the dependent variable goes on the y-axis
- Make sure your label your axes, use a legend if necessary, and have a title

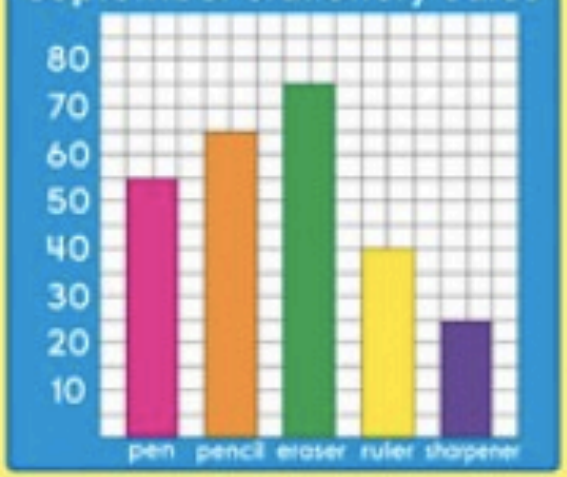
Parts of a Graph



Types of Graphs

Bar Graph

compares choices by how much and how many

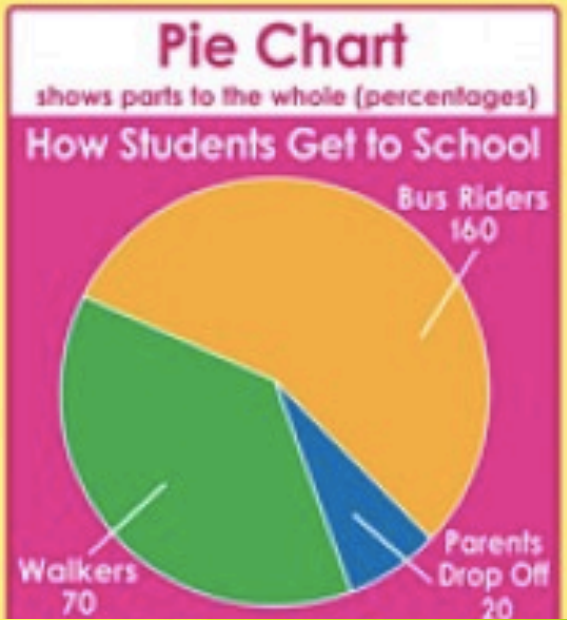


Line Graph

shows one variable over time

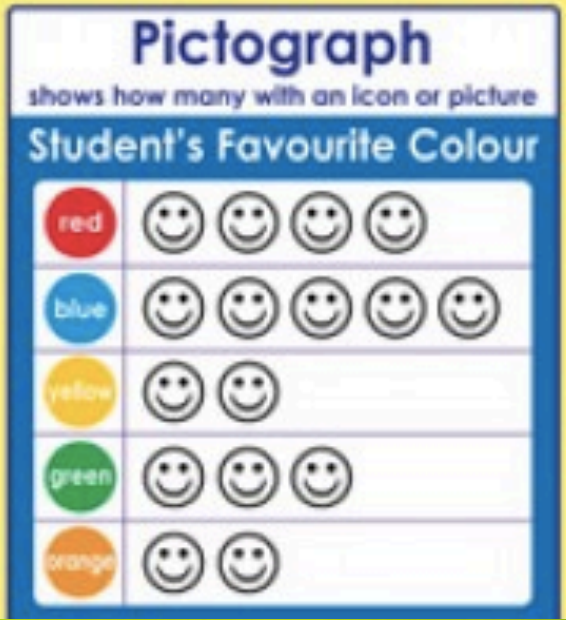
Pie Chart

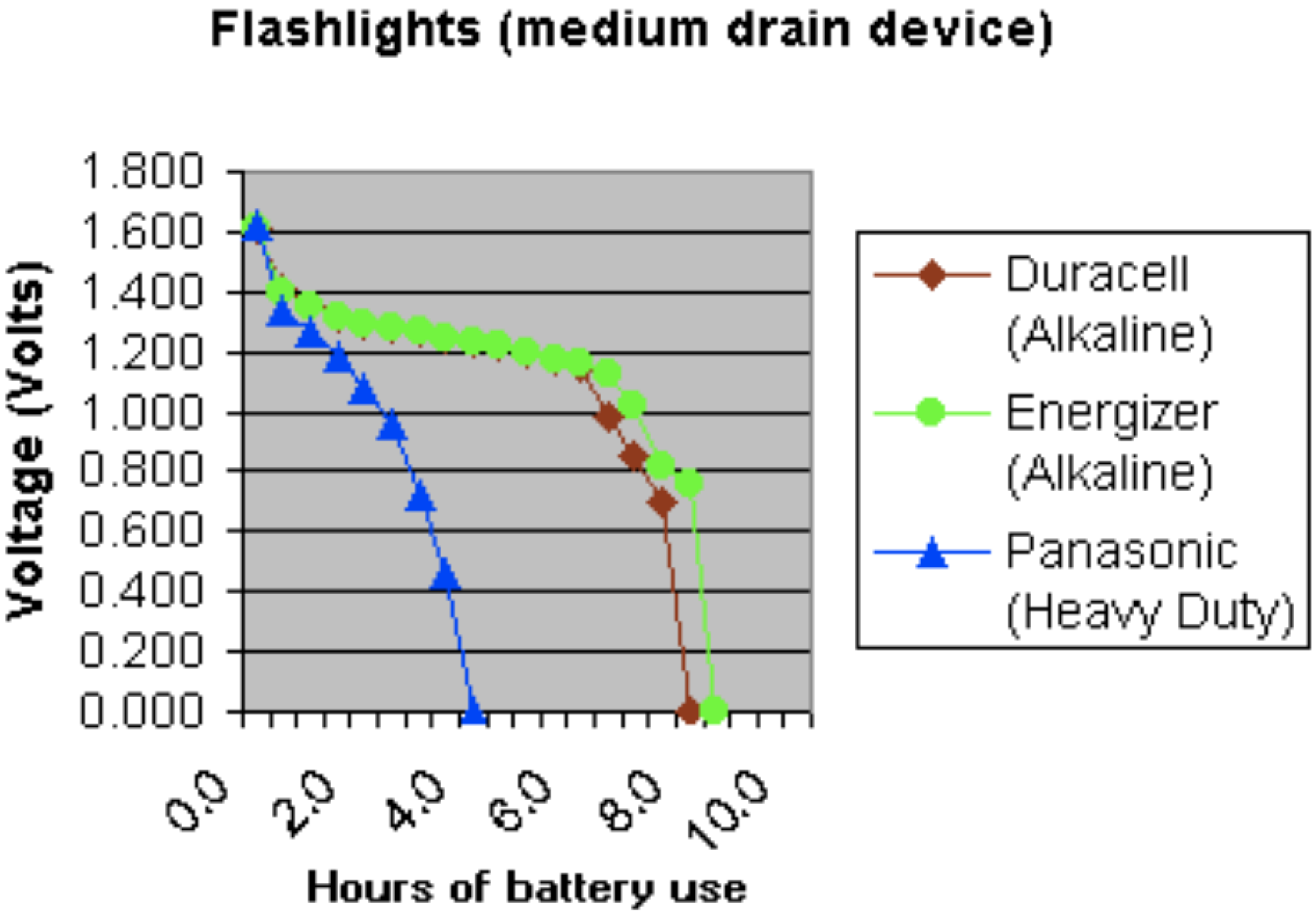
shows parts to the whole (percentages)



Pictograph

shows how many with an icon or picture




Flashlights (medium drain device)
Voltage (Volts)
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0.0
2.0
4.0
6.0
8.0
10.0
Hours of battery use
Duracell (Alkaline)
Energizer (Alkaline)
Panasonic (Heavy Duty)

Assignment #4

- •If you are not done your experiment or research email Mr. Rip immediately and say when you will be done
- •Present your data
- •Submit:
  - Summary data (average, percent, etc.)
  - Graphs
  - Tables
- •Email to jmrip@cbe.ab.ca
- •Due on Thursday, January 30