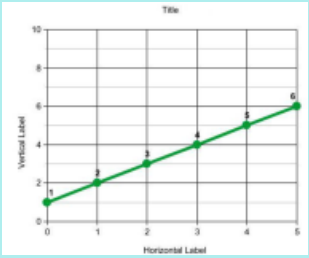
Graphing

EQ:

How is data displayed and interrupted?

In Biology, we will focus on the use of 2 Types of Graphs:

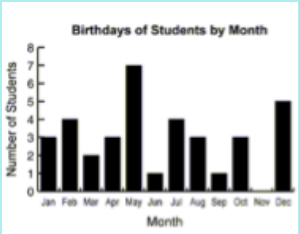
Used to compare types of numbers and changes over time



Line Graph

Used when comparing data or data that is discontinuous

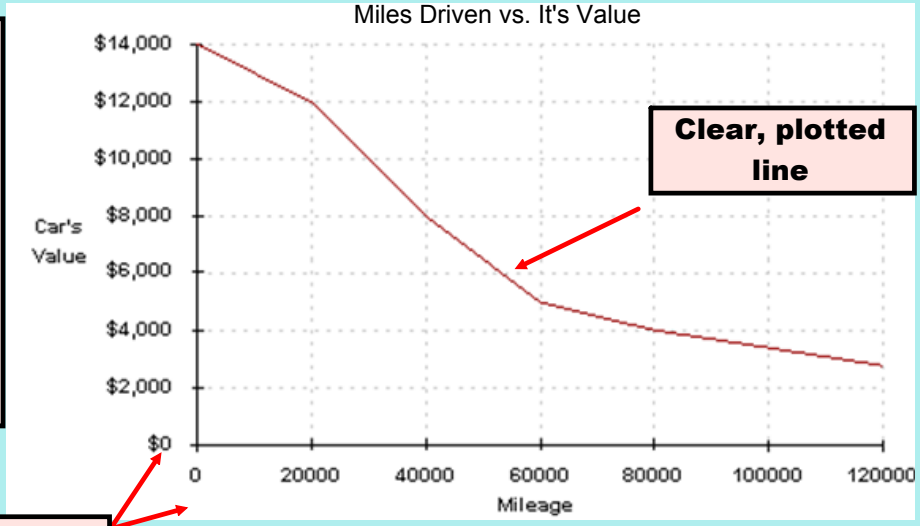
Bar Graph



Line Graphs:

Title

Y axis Label and Units



Clear, plotted line

Both axis scaled

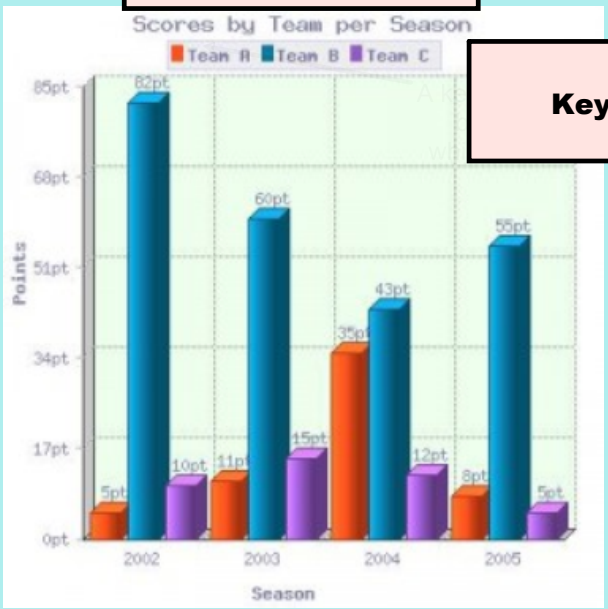
X axis Label and Units

Bar Graphs:

Title

Key

Y axis Label and Units



X axis Label and Units

What the parts mean?

TITLE	The title should be DESCRIPTIVE and include both variables in the experiment	Is labeled with the IV, or the variable being manipulated, along with its units.	X AXIS
Y AXIS	Is labeled with the DV, or the variable being measured, along with its units.	Is necessary for any graph which contains multiple data sets (lines or graphs)	KEY

How do I know when to use which graph?

Line:
#s vs. #s

Bar:
Words vs Words

Let's Practice:


Number of students enrolled in each grade level: 

Change in population of bacteria over 24 hours: 

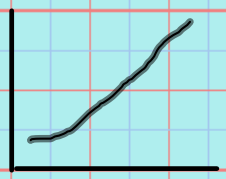
Carbon dioxide emissions over the last decade: 

Relationship of text messaging frequency to age: 

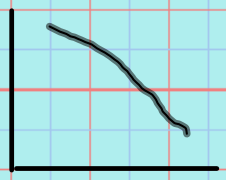
Color of skittle and their appearance in the bag: 

What relationship does the data display?

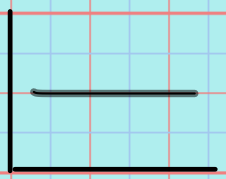
Positive:



Negative:



No Correlation:



BACK

Helpful Hints

Make the graph big. More space=more clarity!

Scaling should be done first. Start with 0 (or use a break) and be sure to increase by equal amounts at each line.

Assume the reader knows nothing...be informative

"Y" be Depedendent when you can be "X"tremely Independent

Use the data to determine which type of graph to create, then graph it.

At O'Connor High School the Administration were wondering which sport season was most popular among boys and girls. In the fall there were 95 boys and 40 girls. In the winter there were 35 boys and 75 girls. In the spring there were 75 boys and 65 girls.

Sample 1

The ADOT wants to conduct research to see if there is a relationship between driving age and fatal accidents each year. The following data was collected:

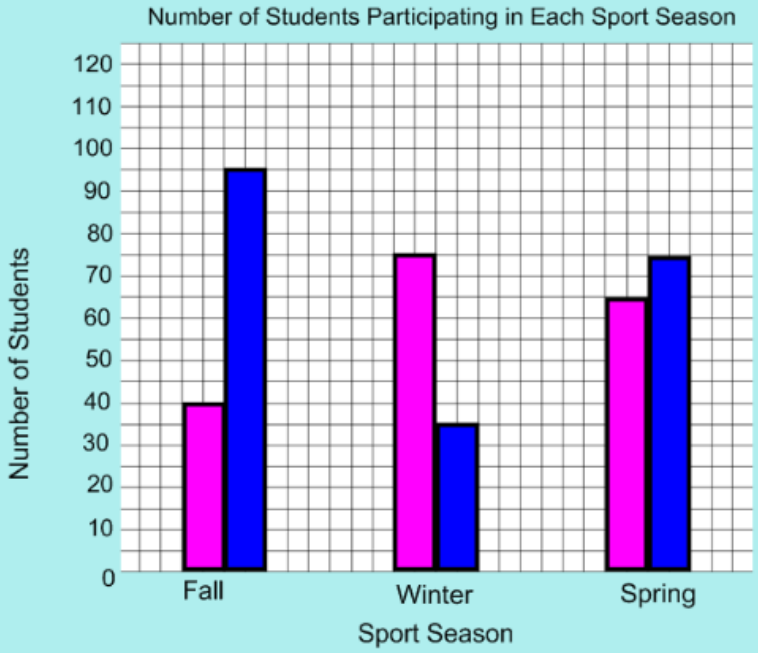
Driver's Age	Fatal Accidents
16	41
25	23
41	17
55	12

Sample 2

At O'Connor High School the Administration were wondering which sport season was most popular among boys and girls. In the fall there were 95 boys and 40 girls. In the winter there were 35 boys and 75 girls. In the spring there were 75 boys and 65 girls.

Sample 1

Key:
Girls
Boys



The ADOT wants to conduct research to see if there is a relationship between driving age and fatal accidents each year. The following data was collected:

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Sample 2