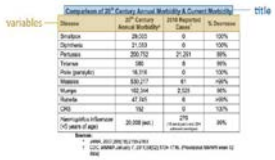
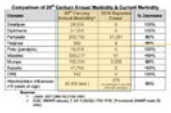
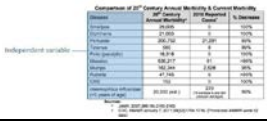
Main Topic: Types of Data

Learning Objectives/Outcomes:

- Define data and provide examples of types of data
- Correctly use pie charts, bar graphs, and line graphs according to the type of data to be represented.

Topic 1: What is data?	**Topic 2:** Data Tables	**Topic 3:** Variables	**Topic 4:** Graphs
Ideas Define data - Data: a collection of observations, measurement, and/or facts for the purpose of studying or analyzing Data is used to: - draw conclusions - make predictions - answer questions - communicate findings	**Ideas** What is a data table? - a set of related information entered in labeled rows and columns - enables scientists to record, sort, analyze, and compare observations and facts What does a data table consist of? - title - variables - measurable units - information or data Explain what measurable units are. - tells how the variables were measured How is information or data collected? - ordered pairs What does Tiny Victorious Unicorns Dance stand for? - T: title - V: variables	**Ideas** What are variables? - things that change in an experiment, observations, or research - usually three types of variables What is an independent variable? - determined by the scientists What is a dependent variable? - things that respond to the change made to the independent variable What is a controlled variable? - other factors which remain constant	**Ideas** What is a graph? - a visual representation (picture) of the information found in a data table. - provides a way for scientists to organize and summarize data - can show relationship between variables What do graphs and its corresponding data table share? - title, variables, units, and data What should every graph contain? - title, axes, intervals, labels, and a scale What does a title show? - the relationship between variables

	- U: units - D: data		Explain where axes are located on a graph. - the lines run across the bottom and up the side What are intervals? - numbers that change by a consistent, equal amount Where should the label be located? - along each axis Explain the scale of a graph. - should be such that 50% or more of the axis is used to plot your data What does T.A.I.L.S stand for? - T: title - A: axes - I: interval - L: labels - S: scale
<u>Key Vocabulary</u> **Data:** a collection of observations, measurement, and/or facts for the purpose of studying or analyzing	**<u>Key Vocabulary</u>** **Data table:** a set of related information entered in labeled rows and columns **measurable units:** tells how the variables were measured **title:** shows the relationship between variables	**<u>Key Vocabulary</u>** **variable:** things that change in an experiment, observations, or research **independent variable:**determined by the scientists **dependent variable:**things that respond to the change made to the independent variable	**<u>Key Vocabulary</u>** **axes:** lines that run across the bottom and up the side of a graph. There is an x-axis and a y-axis. **graphs:**a visual representation (picture) of the information found in a data table. **intervals:** numbers that change by a consistent, equal amount

		controlled variable: other factors which remain constant	**label:** found along each axis that is descriptive
Pictures 	**Pictures** 	**Pictures**  	**Pictures**