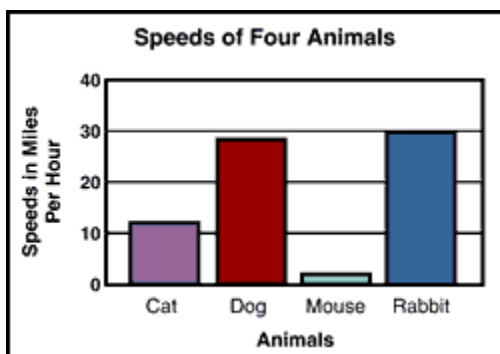




"How's the Weather?" is an exercise that combines science and math as you graph the weather along the Iditarod Trail. In this exercise you will be asked to complete a double-line graph of the weather of a chosen checkpoint over the course of one week. Your graph should show the high and low temperature for seven consecutive days. First, let's take a look at a three different types of graphs.

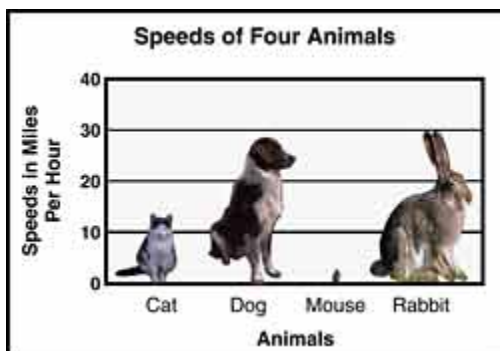
Bar graph

A bar graph is used to compare at least two different things based on one characteristic. For instance, we might use a bar graph to show the top speeds of four different types of animals. Here we would be comparing different animals based on speed.



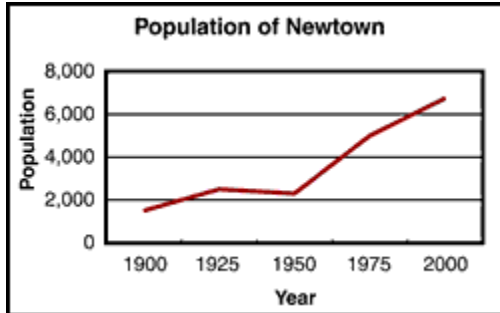
Pictograph

A pictograph is similar to a bar graph, but shows the information using pictures rather than bars.

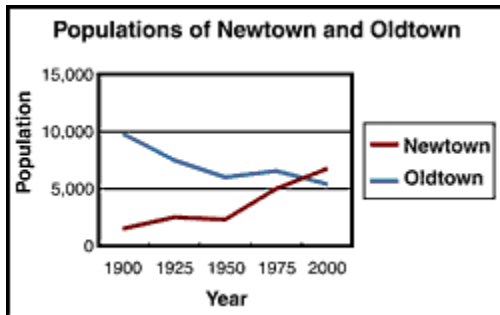


Line Graph

A line graph shows how something changes over time. For instance, we might use a line graph to show the change in population in a town over the course of 100 years.



We can use a double-line graph to compare how two things change over the same time period.



In your exercise you will use a double-line graph to compare two things, the high and low temperatures of a checkpoint, over the course of one week.

Important parts of a graph

Title - Tells what is being graphed... in the graph above this is "Populations of Newtown and Oldtown"

Horizontal Label - Tells what data is on the horizontal axis...in the graph above this is "Year"

Vertical Label - Tells what data is on the vertical axis...in the graph above this is "Population"

Key - Some graphs need a key to indicate the different items being

graphed. In the graph above there is a key showing that Newtown is the blue line and Oldtown is the pink line.

Scale - the numbers chosen to show the data. In the graph above, the vertical scale is 0-15,000. The horizontal scale is 1900-2000.

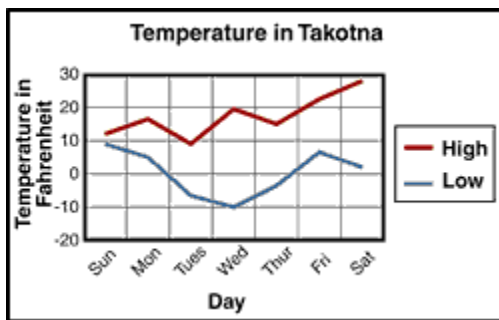
Interval - the distance between marks on the scale. In the graph above, the interval on the vertical axis is 5,000. The interval on the horizontal axis is 25.

The Assignment

Click on the ["Trail Weather"](#) link on the menu on the left. Select a checkpoint to graph for one week. Then check the weather for that checkpoint each day. Make note of the high and low temperatures. Plot those points on your graph. Be sure to use a different color pencil for high and low. That way you won't confuse them.

Once you have plotted the points for several days you can begin to connect the points to each other using a straightedge or ruler to get a straight line. Be sure that your graph has the following; a title, horizontal label, vertical label, key, a carefully selected scale and appropriate intervals.

Here is a tip - while the vertical scale on many graphs starts at 0, you might want to start yours in negative numbers (perhaps -40 degrees Fahrenheit) depending on the actual temperature. Below is a sample of what your graph might look like:



Something to think about: How would meteorologists use this type of data to predict changes in temperature?

This lesson plan was prepared by New York Elementary School teacher Terry Burton.