

Domain	Exploring Data	
Cluster	Select appropriate graphical and numerical methods to explore data.	
Standard(s)	M.ASHS.1	Generate appropriate ways to display various types of data. Instructional Note: Build on data displays introduced in prior courses.

Content Examples

- » Displaying data tables and bar graphs:
<https://www.youtube.com/watch?v=L-iCqKI9ffa>
- » Creating a histogram by hand, frequency and relative frequency:
<https://www.youtube.com/watch?v=zfjOrXFjjH8>
- » Creating frequency polygons:
<https://www.youtube.com/watch?v=bEakGC6Ft0M>
- » Constructing an ogive:
<https://www.youtube.com/watch?v=13QGqWIsLWk>
- » Creating pie charts:
https://www.youtube.com/watch?v=1oShnkmA_ww
- » Creating stem and leaf plot:
<https://www.youtube.com/watch?v=FCVYTIImfw4g>

Relevant Content

Vocabulary

- » Population: All subjects in a study
- » Sample: A subgroup of the population
- » Categorical data: Data that can be divided into groups or described by disjoint sets
- » Quantitative data: Data that is a certain quantity, count, amount, or range
- » Frequency distribution: The organization of raw data in table form using classes and frequencies
- » Bar graph: Graph of data using vertical or horizontal bars whose heights or lengths represent the frequencies of the data
- » Pareto chart: Graph of data using vertical frequency distribution bars for categorical variables that are arranged in order from highest to lowest
- » Histogram: Graph of raw data using contiguous vertical bars (unless the frequency of a class is 0) to represent the frequencies of the classes
- » Frequency polygons: A graph of raw data drawn representing the same set of data as a histogram by using lines to join the midpoints of each interval
- » Ogive (cumulative relative frequency graph): Graph of raw data drawn by plotting points using the upper class limit and the corresponding cumulative frequency
- » Pie graph: Graph of data using a circle that is divided into sections or wedges according to the percentage of frequencies in each category of the distribution
- » Stem and leaf plot: Graph of a data plot that uses part of the data value as the stem and part of the data value as the leaf to form groups or classes

Displaying Categorical and Quantitative Data:

<https://www.statsmedic.com/introstats-chapter-1>

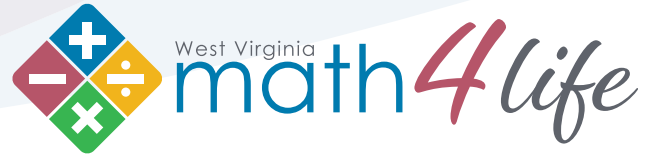
Stemplots and Histograms:

<https://www.learner.org/series/against-all-odds-inside-statistics/>

Assessment Links or Tasks

[Graphing Data Project](#)

Project: Graphing Data



- A. Locate a set of categorical data in a newspaper, magazine, or on the Internet. The data set should include at least 20 elements.
 1. Provide the data in a list and then choose an appropriate graphical method to represent the data set.
 2. Graph the data and be sure to include necessary labeling.
 3. Describe and give a simple interpretation of the graphical representation.

- B. Locate a set of quantitative data with at least 20 elements as above.
 1. Provide the data in a list and then choose an appropriate graphical method to represent the data set.
 2. Graph the data and be sure to include necessary labeling.
 3. Describe and give a simple interpretation of the graphical representation.