Stem-and-leaf diagram, also called a stem-and-leaf plot, is a diagram that quickly summarizes data while maintaining the individual data points. In such a diagram, the "stem" is a column of the unique elements of data after removing the last digit. The final digits ("leaves") of each column are then placed in a row next to the appropriate column and sorted in numerical order. This diagram was invented by John Tukey.

A Stem and Leaf Plot is a type of graph that is similar to a histogram but shows more information. The Stem-and-Leaf Plot summarizes the shape of a set of data (the distribution) and provides extra detail regarding individual values. The data is arranged by place value. The digits in the largest place is referred to as the stem and the digits in the smallest place are referred to as the leaf (leaves). The leaves are always displayed to the left of the stem. Stem and Leaf Plots are great organizers for large amounts of information. This diagram provides a partial sorting of the data and allows you to detect the distributional pattern of the data.

There are three steps for drawing a tem and leaf diagram.
Split the data into two pieces, stem and leaf.
Arrange the stems from low to high.
Attach each leaf to the appropriate stem.

Here the leaf would be the single rightmost digit and the stem would be the leftmost one or two digits

Example I
The table below shows the stem-and-leaf diagram for the data set (147, 117, 101, 149, 145, 105, 93, 94, 114, 104, 136, 140, 121, 145, 120, 142, 98, 135, 135, 132)

stem	leaves
9	3, 4, 8
10	1, 4, 5
11	4, 7
12	0, 1
13	2, 5, 5, 6
14	0, 2, 5, 5, 7, 9

Example II
44 46 47 49 63 64 66 68 68 72 72 75 76 81 84 88 106

stem	leaves
4	4 6 7 9
5	
6	3 4 6 8 8
7	2 2 5 6
8	1 4 8
9	
10	6

Uses of Stem and Leaf Plots

They are usually used when there are large amounts of numbers to analyze. Series of scores on sports teams, series of temperatures or rainfall over a period of time, series of classroom test scores are examples of when Stem and Leaf Plots could be used. The stem and leaf is also useful because it partially sorts the data.