Graph Choice Chart

What question would you like to explore? Write your question as a complete sentence.

Does your question ask about the variability within a group of data points?
(i.e. the range of the data, the shape of the distribution, or what the center of the data is)
(one group, one variable)

Examples:
1. How high tides rise to the same height?
2. How variable are windspeeds here?
3. What is the range and distribution of incomes in the United States?

Does your question ask how a total is proportioned into sub-groups?
(Or what proportion a sub-group is of a total?)
(one group with sub-groups, one variable)

Examples:
1. Which circuit accounts for the largest proportion of the electricity use by our household?
2. What proportion of U.S. energy comes from wind?
3. What proportion of U.S. residents take public transportation to work?

Does your question compare two or more groups to decide if the groups are the same or different?
(two groups, one variable)

Are you comparing single numbers that summarize a group? (such as mean, median, or total...)

Examples:
1. Was the total snowfall greater this winter than last winter?
2. Do cats and dogs have the same average body temperature?
3. How do the median incomes for the U.S. and Sweden compare?

Does it ask about how something changes through linear time?

Examples:
1. Is the fuel efficiency of a car related to its weight?
2. Are smoking rates correlated with median income?
3. Given a fixed volume, how are temperature and pressure related?

Does your question ask whether variability of all data points in each group to decide if any difference between the groups is meaningful?

Examples:
1. Which of the two car designs is most consistently the fastest?
2. Is there a meaningful difference in the heights of fertilized and unfertilized bean plants?

Make a

FREQUENCY PLOT

For each group make a

DOT PLOT

HISTOGRAM

BOX PLOT

BAR GRAPH

SCATTER PLOT

LINE GRAPH

PIE CHART

STACKED BAR CHART

The Maine Data Literacy Project -- Graph Choice Chart
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