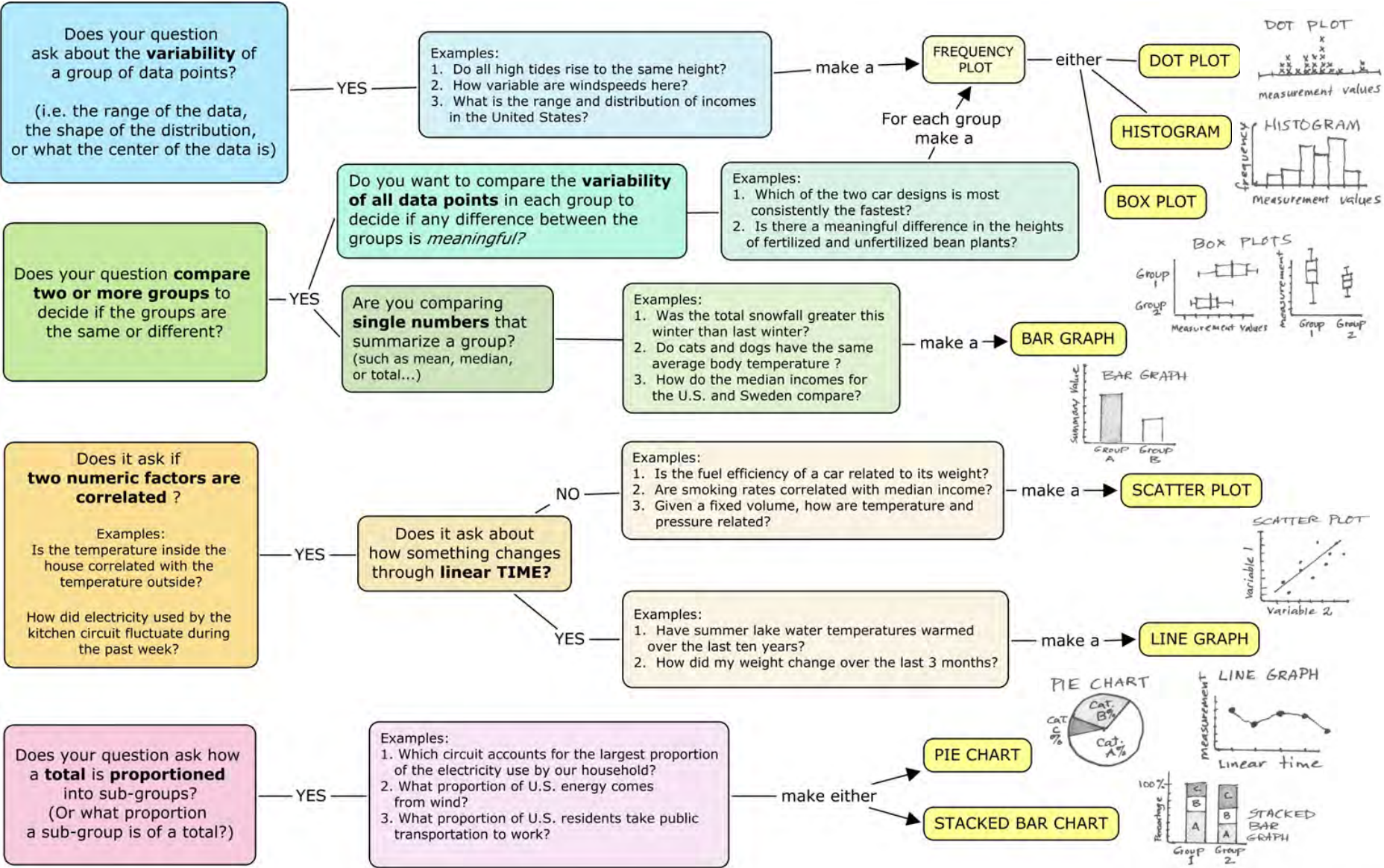
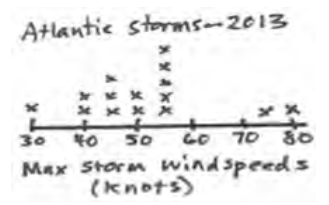
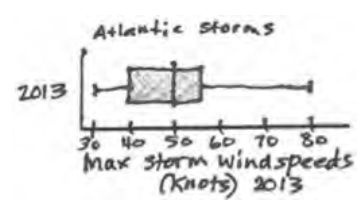
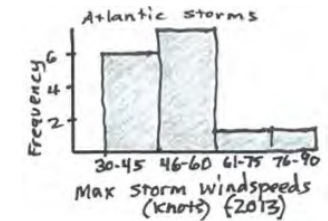
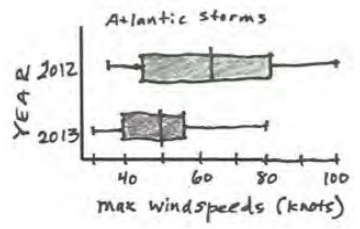
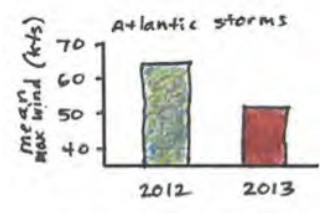
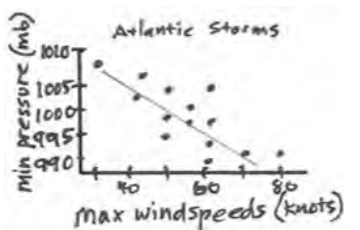
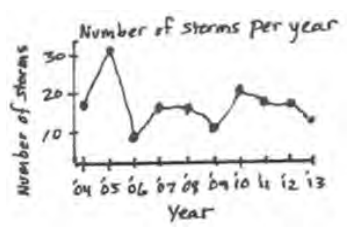
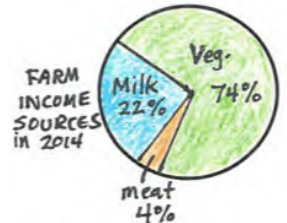



# Graph Choice Chart

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



## Graphing tips

Variability questions: <b>Frequency plot</b> (3 kinds)	<b>Dot plot</b>	<b>Box &amp; whisker plot</b>	<b>Histogram</b>
<p>Kind of data: <b>One categorical group</b> and <b>One numeric variable</b> (one axis)</p> <p><i>Frequency plots show how variable the group is. Describe variability by range, measure of center (mean, median, or mode), and the shape of the distribution.</i></p>			
Comparing groups questions:	<b>Frequency plots</b>	OR	<b>Bar graph</b>
<p>Kind of data: <b>Two or more categorical groups</b> &amp; <b>One numeric variable</b></p> <p><i>Frequency plots allow you to compare how variable the groups are. Bar graphs only show a single number (ie. sum, average, percent or count) for each group.</i></p>	 <p style="text-align: center; font-size: small;">(To compare two groups of values)</p>	 <p style="text-align: center; font-size: small;">(To compare two summary values)</p>	<p>Criteria for an informative graph:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Graph type fits the question</li> <li><input type="checkbox"/> Axes are drawn &amp; scaled correctly</li> <li><input type="checkbox"/> Axes are labeled clearly, correctly</li> <li><input type="checkbox"/> Units are given</li> <li><input type="checkbox"/> Data are plotted accurately</li> <li><input type="checkbox"/> Legend is present, if needed</li> <li><input type="checkbox"/> Graph is overall neat &amp; legible</li> <li><input type="checkbox"/> Title and/or caption present</li> <li><input type="checkbox"/> Trend line shown (scatter plot or line graph only)</li> <li><input type="checkbox"/> Graph helps answer the question</li> </ul>
<p>Kind of data: <b>Two numeric variables</b></p> <p><i>Both variables must be continuously numeric. Connect dots only if one variable is linear time (i.e. days, years...) Put time on the X-axis. Show correlation with a 'line of best fit'.</i></p>			
Proportion (percentage) questions:	<b>Pie chart</b>	OR	<b>Stacked bar graph</b>
<p>Kind of data: Size of a subgroup as a <b>percentage</b> of the whole group (Total of sub-groups must = 100%)</p> <p><i>In pie charts and stacked bar graphs, all sub-group percentages must total 100%.</i></p>			<p><i>(There are other kinds of questions and other kinds of graphs, and often more than one graph type is useful for a given question. Learn to graph data for these basic kinds of questions first.)</i></p>