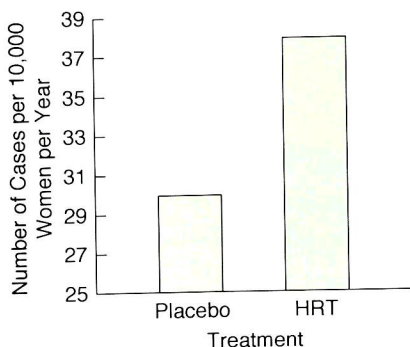


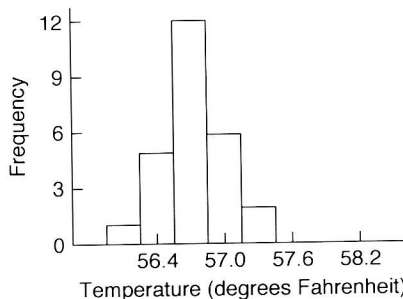
45 Hormone Replacement Therapy Again The bar chart shows a comparison of breast cancer rates for those who took HRT and those who took a placebo. Explain why the graph is deceptive, and indicate what could be done to make it less so.

Bar Chart of Rate of Breast Cancer

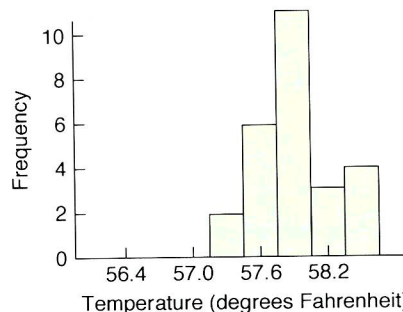


***49 Global Temperatures** The histograms show the average global temperature per year for two 26-year ranges in degrees Fahrenheit. The range for 1880 to 1905 is on the top, and the range for 1980 to 2005 is on the bottom. Compare the two histograms for the two time periods, and explain what they show. Also estimate the difference between the centers. That is, about how much does the typical global temperature for the 1980–2005 time period differ from that for the 1880–1905 period? (Source: Goddard Institute for Space Studies, NASA, 2009)

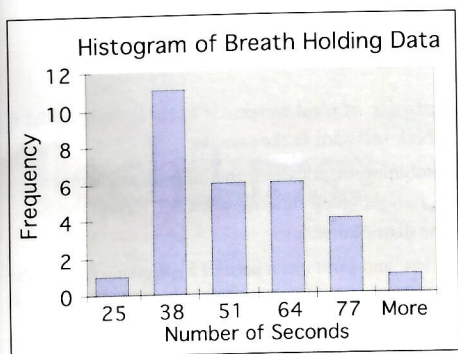
1880–1905



1980–2005



46 Holding Breath A group of students held their breath as long as possible and recorded the times in seconds. The times went from a low of 25 seconds to a high of 90 seconds, as you can see in the stemplot. Suggest improvements to the histogram below generated by Excel, assuming that what is wanted is a histogram of the data (not a bar chart).



2	588
3	00035678
4	0033557
5	3357
6	005559
7	
8	
9	0

47 Gender

- An elementary school class includes 12 girls and 8 boys. Which type of graph would be appropriate to show the distribution of gender in the class: a pie chart or a histogram?
- In a school district, there are 45 elementary school classrooms, each containing 20 students. Which type of graph would be appropriate to show the distribution of the number of boys in the classrooms: a pie chart or a histogram?

48 Handedness

- An elementary school class is made up of 3 children who are left-handed and 17 who are right-handed. The objects of study are the children, and the variable of interest is whether the child is right- or left-handed. Which type of graph would be appropriate to show the distribution of handedness in the class: a pie chart or a histogram?
- In a school district, there are 45 elementary school classrooms, each containing 20 students. The unit of study is a classroom, and the variable is the number of right-handed students in each class. Which type of graph would be appropriate to show the distribution of the number of right-handed students in the classrooms: a pie chart or a histogram?

***50 Employment after Law School** Accredited law schools were ranked from 1 for the best (Harvard) down to number 181 by the Internet Research Legal Group (ILRG). When you decide on a law school to attend, one of the things you might be interested in is whether, after graduation, you will be able to get a job for which your law degree is required. We split the group of 181 law schools in half, with the top-ranked schools in one group and the lower ranked schools in the other. The histograms show the distribution of the percentages of graduates who, 9 months after graduating, have obtained jobs that require a law degree. Compare the two histograms.

Top 90 Law Schools

