6e Data Analysis Answers

**Chapter1** Working With Graphs

1. The subject is income disparity among world regions
2. The independent variable is the year
3. The dependent variable is per capita income in constant dollars
4. Yes, the years follow a linear sequence independent of income
5. The X-axis units are years from 1970 to 2000
6. The Y-axis units are dollars per capita ranging from 0 to 25,000
7. The difference between the highest and lowest amounts in 1970 is from a few hundred dollars to nearly 5000 dollars. At the right end of the graph (2000)North America has a range from about 15,000 to 23,000 dollars, while Africa is still only a few hundred dollars per year.
8. The trend shows that rich regions (such as North America) have gotten richer, while poor regions (such as Africa) have remained nearly constant over this 30-year period.

**Chapter 2** Nutrients in a Wetland

1. Two: N and P; depending on pH, they may form bonds with P
2. Atmosphere, surface water, ground water; atmosphere: airborne pollution, as from power plants; fertilizers to lawns and farm fields, pet waste on sidewalks entering surface water systems, septic systems release nutrients to ground water. Students may have a shorter or different list.
3. N2, N2O, NO3, NH4-N, organic N, NH3
4. Organic N is contained in C-based molecules, such as carbohydrates, proteins, lipids, or nucleic acids; NH4; litter fall and peat accretion
5. Denitrification
6. DIP; inorganic, it contains no C; yes