

Following are some carefully chosen problems and activities to highlight science applications as well as resource management. These carefully chosen application problems gave my math students an opportunity to think about the environment and opened up discussions on ways to protect it and how to help conserve the resources we have.

In my **Developmental Mathematics** (MA085) and **Pre-College Mathematics** (MA095) classes, some of the textbook application problems we discussed are the following:

1. Americans are eating more fish. This year the average American will eat 15.5 pounds compared to only 12.5 pounds per year a decade ago. Find the percent of increase.
(prompted a discussion of our food sources and how to take care of our waters so we continue to have enough fishes.)
2. In the past five years, the cost of generating electricity from the sun has been brought down from 24 cents per kilowatt hour to 8 cents (less than the newest nuclear power plants.) Find the percent of decrease. *(prompted a discussion of our energy sources and its conservation).*
3. The average increase in residential winter heating bills will be 9.8%. If the increase amounts to \$87.20, find
 - a) the average heating bill before the increase and
 - b) the average heating bill after the increase.
4. Scientists tell us that there are 9600 species of birds and that 1000 of these species are in danger of extinction. What percent of the bird species are in danger of extinction?
(prompted a discussion of the Koko bird here on Guam and the efforts put forth for saving it.)

(Source: Developmental Mathematics, Basic Mathematics and Algebra, 2nd Edition, Lial, Hornsby, McGinnis, Salzman and Hestwood)