1. **Locate a short article in a scientific journal that is interesting to you and that uses statistics.**

   I selected the article "Sustaining fisheries yields over evolutionary time scales" by Conover and Munch from the 5 July 2002 issue of *Science*.

2. **Briefly describe the method of data collection.**

   The authors begin by creating six captive populations of fish with 1100 fish in each population. The groups are randomly assigned and subject to different treatment regimes. The fish were allowed to grow and then were harvested by different criteria: the smallest 90%, the largest 90%, and a random 90% were harvested for two populations for each treatment. The survivors spawned a new generation and this was repeated four times. At each generation and for each population, the authors measured the average weight of the fish.

3. **What is one scientific question that your article addresses?**

   The article addresses the question, does harvesting of fish by size (small-, random-, or large-harvesting) result in comparatively different sizes of fish in later generations among the different harvesting methods?

4. **What results does the article include regarding the scientific question?**

   The article demonstrates that the method of harvesting fish affects the average size of subsequent generations. The average size of the fourth generation fish was largest for the small-harvested populations, medium for the random-harvested populations, and smallest in the large-harvested populations.

   The inferred reason is that selection results in population changes in the growth rates in subsequent generations.

5. **Describe one of the graphs.**

   Figure 2 of the article shows the growth in mean weight in grams of the fish from six different populations versus age of the fish in days. At age 85 days the fish are all of similar weight. At age 190 days, there are clear differences in mean weight among the three different treatment groups and only small differences in mean weight for the populations with the same treatment. Populations where small fish were harvested have relatively high average weights compared to those in which large fish were harvested.

6. **Identify a variable that is measured by the authors.**

   The authors measure the mean egg volume produced in each line. The means for the three groups are 0.61, 0.65, and 0.72 mm^3 respectively.

7. **Identify a method of statistical analysis used by the authors and report a given result.**

   The authors use a regression analysis to describe the relationship between mean weight of the harvested fish and generation. For the large-harvested lines, they find that the mean weight decreases by -0.82 grams per generation (SE=0.20, P=0.0004).