Handout H03-1. Water, Combustion, and the Global Carbon Cycle

1. Write one paragraph that explains what is going on in the white columns of smoke in this photo. Use what you know about where heat goes and the products of combustion.

2. Write a few sentences that explain how the chemical processes of combustion, cellular respiration, and photosynthesis are related.

3. Read the article on Handout H03-2 (or the full article). Then write 1-2 paragraphs that answer these questions. Use specific evidence and quotes from the article to support your answers.
   a) Based upon the information in the article, how does stand-replacing fire affect whether forests are a source or sink for carbon?
   b) Does a forest change over time from source to sink, or from sink to source?
   c) What is the most important variable that makes an ecosystem gain or lose carbon after fire?