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### **Piedmont Project**

General Chemistry Laboratory: Chem 141L/142L

As a result of my participation in the Piedmont Project, I have developed a laboratory experiment that deals with recycling an aluminum can. The students will use an aluminum can as a starting material for another synthesis. The experiment includes background information on recycling and discusses the energy requirements for manufacturing a new can from aluminum ore versus recycling an already existing can.

In addition, I have introduced “environmentally motivated” questions into the lab curriculum. Another experiment dealing with fertilizers now includes discussion of the impact of fertilizer on the environment. Another lab deals with environmental factors that may lead to iron deficiency.

Finally, scientific ethics will be discussed as we begin studying nanotechnology. The students will develop ferrofluids and liquid crystals. They will be asked to consider the impact of creating new materials and the safety precautions that may be needed when developing new materials with unusual properties. It is a great opportunity to pose the question: What responsibilities do scientists have to society when creating new materials?