Procedure Step 1. Assume that the common ancestor DNA synthesized in Part II represents a section of the hemoglobin gene of a hypothetical common ancestor. Compare this common ancestor DNA to all three samples of DNA (gorilla, human, and chimpanzee), one sample at a time. Record the data in a table.

1. Which DNA is most similar to the common-ancestor DNA?
2. Which two DNAs were most similar in the way that they compared to the common-ancestor DNA?
3. Which of the hypotheses developed in Part I do your data best support?
4. Do your findings prove that this hypothesis is correct? Why or why not?
5. Based on the hypothesis that your data best supported, which of the following statements is most accurate? Explain your answer in a short paragraph.
   1. Humans and apes have a common ancestor.
   2. Humans evolved from apes.
6. According to all the data collected, which of the following statements is most accurate? Explain your answer in a short paragraph.
   1. Chimpanzees and humans have a common ancestor.
   2. Chimpanzees are the direct ancestors of humans.
7. A comparison of many more DNA sequences indicates that human DNA and chimpanzee DNA are 98.8 percent identical. What parts of your data support this result?
8. What methods of science did you use in this activity?