

3. Many biologists believe that the number of differences between the proteins of different species indicates how long ago the species diverged from common ancestors. Why do these biologists believe that humans, chimpanzees, and gorillas diverged from a common ancestor only a few million years ago? \_\_\_\_\_

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4. Other proteins can be used to establish degrees of evolutionary relatedness between organisms. Would you expect to find roughly the same number of differences in the amino acid chains when comparing organisms? Explain your answer. \_\_\_\_\_

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#### Going Further

Conduct an investigation on the means by which amino acid sequences are used to construct *phylogenetic*, or *evolutionary*, *trees*. Then, using an appropriate reference, make a large bulletin-board drawing showing an example of a phylogenetic tree.