

Earth Science Connection

Biogeography Biogeography is the study of the geographical distribution of organisms and ecosystems over space and time. Similar to the way fossil evidence was used to support the idea that Earth's surface has changed over time due to continental drift, biogeography can be used to support the idea that species change over time due to evolution through natural selection. For example, what might be indicated by the fact that marsupials only exist in the Americas and Australia?



How does the geographical distribution of closely related species, and the distribution of similar but not related species, provide evidence for evolution? Use library and Internet resources to select a biogeographical example that provides a line of evidence for evolution. Then, create a conceptual model to represent your example and explain your model in a short story.

FIGURE 1: Female marsupials care for their undeveloped young outside of their bodies in special pouches until they reach independence.



Social Studies Connection

The Importance of Relationships As early humans evolved, so did their societies. Humans began as small groups of hunter-gatherers. Some societies have shifted from hunter-gatherer to agriculture to industrialization and finally to urban, post-industrial societies. Industrial and post-industrial societies may minimize relationships that are common in other societies. For example, electronic socializing has taken the place of other forms of communication, such as phone calls, letters, and in-person conversation.



Using library and Internet resources, research the social structures that are in place in hunter-gatherer, agricultural, industrial, and post-industrial human societies and how each structure emphasizes or minimizes the need for social relationships. What might explain a shift in social behavior in modern humans? Write a report that outlines your position on whether electronic socializing is impacting the quality of relationships in modern humans. Include background on the evolution or changing nature of relationships in human societies. Make sure you provide evidence that supports your claim.

FIGURE 2: Social networking may actually reduce social connections between peers.



Life Science Connection

Domesticating Foxes Researchers in Russia have been exploring the domestication of foxes for over 50 years. From the parent generation onward, only the least aggressive foxes have been allowed to breed. This experiment in domestication has significantly changed both the behavior and the appearance of the foxes over a relatively short time period.



Using library and Internet resources, research the Russian fox domestication experiment. Develop a scientific poster that outlines the purpose, methods, and outcomes of the fox domestication experiment, with a discussion about next steps and what the outcomes indicate about the mechanism for domestication in dogs.

FIGURE 3: Domesticated Fox

