

Putting the Pieces Back Together - The Elephant Fossil Find

In this activity you and the members of your group will play the roles of paleontologists working at Taita-Rukinga Wildlife Conservancy, Kenya. Your group includes elephant behavior expert, Dr. Bob and Indianapolis Zoological Society information manager, Suzanne. From your four-wheel-drive vehicles you drive upon the remains of what appears to be a fossilized elephant skeleton. But wait, as you survey the area you come across other fossilized bones as well. The focus of the research team has now shifted into paleontology. Have you made a discovery? Your group carefully digs up the visible bones. The scorching sun makes it too uncomfortable to continue with the dig, so you return to the base camp with your find.

That night in camp you and your colleagues begin to assemble the bones you found. (Teacher should give the group twelve “fossil bones” from the first envelope marked set #1. If students are pulling out the bones make sure they take the bones out without looking at the ones remaining in the envelope!) Since the bones were all found together and in an undisturbed layer, you assume you have bones from just a couple of animals that perished around the same period of time. You spend the rest of the evening arranging the first set of bones in hopes of identifying the animal. (Use the next 5 - 10 minutes to try various combinations.) As the night wears on, you and your colleagues get tired and decide to retire and begin anew in the morning.

At daybreak your group looks at the bones. It is clear that the skeletons are incomplete. You and your colleagues decide to go back to the dig to see if you can find any more bones. The rock layers that hold the fossils are very hard but finally you find three more bones. With the day coming to a close and running out of water, you and your group make their way back to the camp for another try at assembling the bones of the mystery animals. (Withdraw the remaining nine bones from envelope #1. Use the next few minutes to incorporate your new findings). Discuss what skeletons your group thinks they have found.

The next day is the last day spent at the wildlife conservancy. You and your group of researchers decide to make a side trip to see Dr. Richard Leakey, world-renowned paleontologist and director of Kenya's National Museums, to obtain resources and direction on solving the skeleton mystery before returning back to the United States. Using the museum's resources, you notice some interesting similarities between some of the museum's drawings and the fossils found at the dig. (Use the two drawings to assist you in your final assembly of the fossil skeletons. Redo the same activity with the bones in envelope # 2.)