

Article-Based Questions

Directions: After reading the article “One Africa exodus populated globe,” answer these questions:

1. What is the main topic of this article?
2. What is the long-standing debate discussed in the article?
3. What do the recent genetic studies say about this debate?
4. How are computer models being used to add to the debate discussed in the article?
5. What are some factors that might account for the migration spreading east rather than north, as depicted on the map on Page 6?
6. Why might the new studies lead to differing ideas about the timing of human migration out of Africa?

Answer Key**1. What is the main topic of this article?**

Possible student response: Recent studies add new evidence to the debate over how humans migrated out of Africa and populated the globe. Some of the recent studies come to similar conclusions with some notable differences.

2. What is the long-standing debate discussed in the article?

Possible student response: Scientists are debating when humans first left Africa and how many waves of migration occurred.

3. What do recent genetic studies say about this debate?

Possible student response: Recent genetic studies conclude that all humans currently living outside of Africa descended from one primary migration that left Africa 50,000 to 75,000 years ago.

4. How are computer models being used to add to the debate discussed in the article?

Possible student response: Computer models showing how the climate changed over time put the migrations into a broader environmental context. These simulations can either lend support to or question existing ideas. Though scientists calculated based on genetic evidence that humans moved out of Africa 50,000 to 75,000 years ago, climate models show a period of severe drought 60,000 to 70,000 years ago. This drought would have made the corridor for migration very difficult to cross.

5. What are some factors that might account for the migration spreading east rather than north, as depicted in the map on Page 6?

Possible student response: Neandertals may have kept modern humans mostly out of Europe. Modern humans may have been following food as they migrated, or the northern regions may have been too cold or covered in ice and therefore difficult to traverse.

6. Why might the new studies lead to differing ideas about the timing of human migration out of Africa?

Possible student response: Genetic dating methods can produce different information depending on the mutation rates selected and could be inaccurate due to skewed sampling or biased analysis. Climate simulations depend on the values used for variables in the model, which aren't always well-known. Models can also omit important variables or not give enough weight to some, resulting in flawed conclusions.