

Name: _____

In-Class Activity – Rise of the Continents

Answer the following questions based on information from Rise of the Continents Episode One: Africa. Your answers must be in the form of complete sentences in Standard English, not a bunch of phrases.

1. What caused the formation of the massive basalt in Victorian Gorge?

2. What do the Sierra Leone diamonds reveal about the age of the West African Craton?

3. What does the change in diamond inclusions from olivine (in diamonds older than 3 billion years) to eclogite (in diamonds younger than 3 billion years) indicate about the history of plate tectonics on Earth?

4. Ol Doinyo Lengai lava contains a very unusual mineral mixture that is rich in minerals that cause the surrounding grasslands to be especially rich in nutrients. What is the origin of this unusual carbonatite lava?

5. What has caused Africa's Great Rift Valley to form over the last 25 million years? Other than the unusual lava of the Ol Doinyo Lengai volcano, what other evidence is there to support that this rift may tear the African continent asunder?