Name _____	Grade = ___/22
Section _____	____% correct

Recitation 9: Climate Impacts on Humans

Part I: Climate Change and Human Evolution

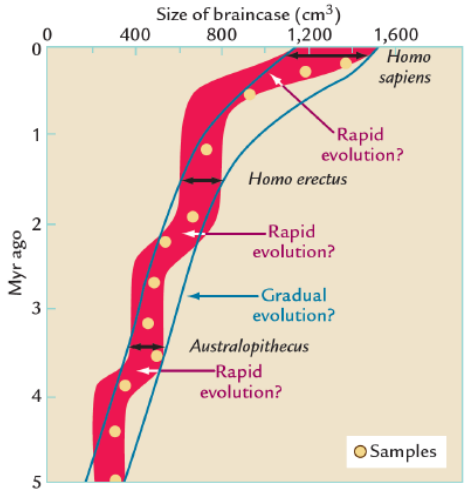
The following activity explores the intersection of human evolution, climate, and the environment.

1. When did the genus *Homo* branch off from the pre-human line? [1 point]

2. True or false: *Homo sapiens* inhabited the Earth during the Last Glacial Maximum. [1 point]

3. Please explain in your words what the Savannah Hypothesis is, and what evidence supports it. Be sure to note which aspect of human development it relates to. [2 points]

4. The below diagram shows that based on available evidence, the evolution of braincase size in the ancestral line leading to *Homo sapiens* could have occurred either gradually or in short bursts. What two factors that explain this uncertainty? [2 points]



are

5. Please explain in your own words the push vs pull hypotheses for human migrations. [2 points]

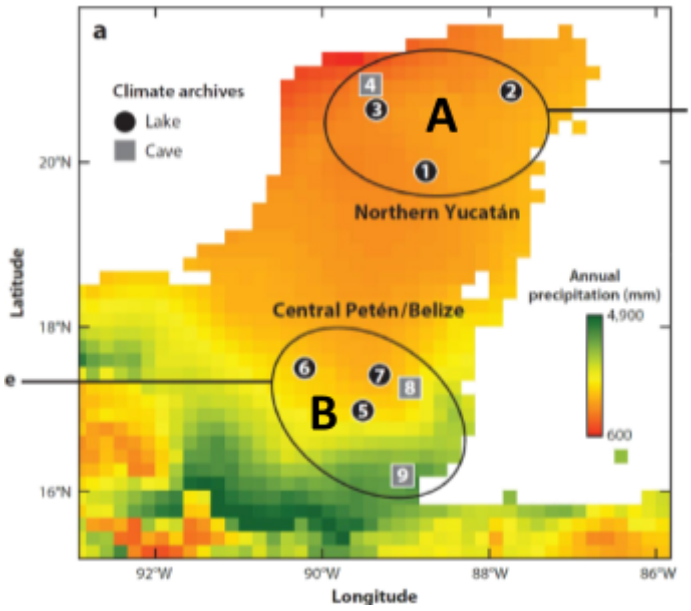
6. Do African climate records support the push or pull hypothesis? Explain your answer. [2 points]

7. What are two lines of evidence that support the overkill hypothesis to explain megafauna extinctions at the end of the last glacial period? [2 points]

Part II: Ancient Maya and Drought

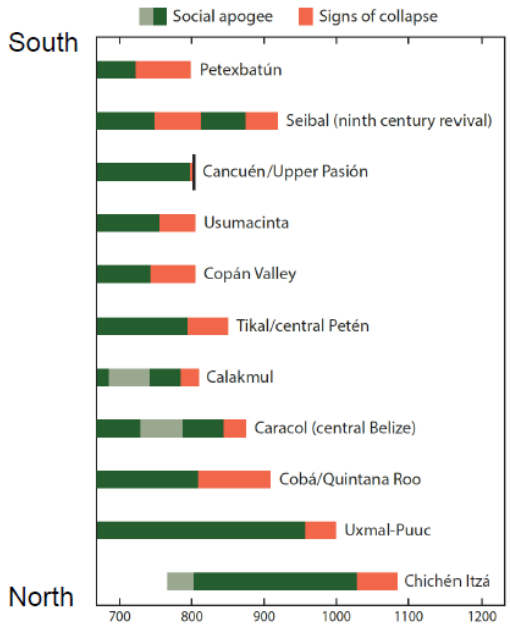
Scientists and anthropologists have worked together to try to piece together the complex story of how climate change impacted the ancient Mayan civilization.

8. The image to the right shows that annual precipitation varies widely across the Yucatán peninsula. In which of the two circled regions is annual precipitation highest (A or B)? [1 point]



9. Give two examples of adaptations to earlier periods of drought that increased the resiliency of the Mayan civilization during the Classic Period droughts? [2 points]

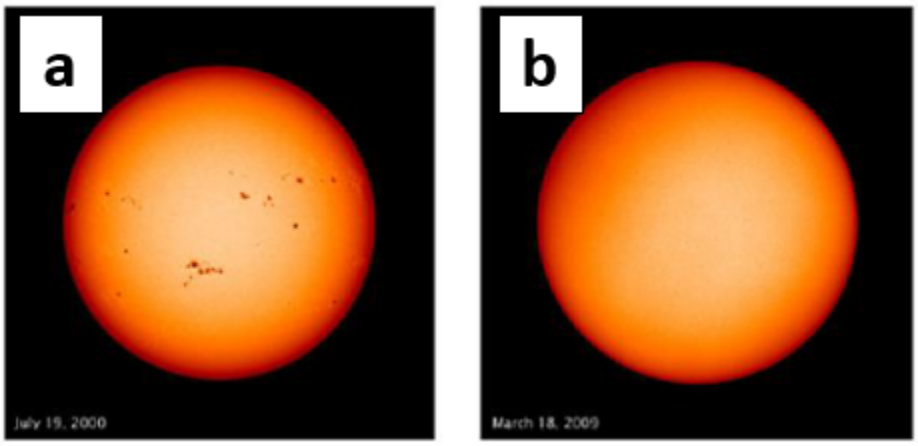
10. The below diagram shows that "signs of collapse" first appeared in the southern part of the Yucatán Peninsula before spreading to the north following the Mayan Classic Period. What is one potential explanation for this pattern? [1 point]



Part III: The Little Ice Age

The Little Ice Age was a period of widespread cold conditions that mainly impacted Europe. You will explore the drivers and impacts of climate during time period by answering the questions below.

11. The two images to the right show the sun with different amounts of sunspot coverage. Would we expect greater solar emissions from the sun shown in figure (a) or in figure (b)? [1 point]



12. What determines whether volcanic eruptions will cause warming or cooling? [1 point]

13. List two lines of evidence for cooler temperatures in the Northern Hemisphere during the Little Ice Age. [2 points]

14. Describe two impacts of the Little Ice Age on humans. [2 points]