“A Study of Seeps and Springs” Reading Guide

1. Describe the Grand Canyon’s Seeps and Springs Study (who is involved, how long is it, why is it taking place, what are the possible implications of the study).

2. Where does all the water on the Coconino Plateau between Tusayan and Flagstaff come from?

3. Is the Colorado River's source located in the Grand Canyon? If not, where is it located?
4. What are aquifers? How many regional aquifers exist on the Coconino Plateau?

5. How are aquifers formed?

6. Fifty to seventy years ago, a chemical called tritium rained on the Coconino Plateau. It was caused by fallout from atomic bomb testing during the 1950s. What does this tell researchers about the age of the water falling on the Plateau? Why is this important?

7. If aquifers hold water that is 10,000 to 20,000 years old (water that fell during the Pleistocene Epoch), is it likely that the waters will ever be replenished? Explain your decision.
8. Springs make up less than ______% of the land in the Grand Canyon.

9. Explain the unique situation of plants and animals that make up the ecosystems surrounding springs in the Grand Canyon.

10. What is the mission of the National Park Service?

11. We should protect the Grand Canyon’s seeps and springs to:
   a. refresh ______________________
   b. nourish the canyon’s ________________ and ________________
   c. continue the ________________ processes that created this ________________ canyon