

Kaibab Mystery Questions—Part 3

Stop 12B: Mile 80.5

- What type of rock do you observe here—igneous, sedimentary, metamorphic? Is there more than one kind of rock? How do you know?
- Are these rocks older or younger than the sedimentary rocks at Grand Canyon? How do you know? (Think about what you learned about igneous and metamorphic rocks during the Earth History Course.)

Stop 13B: Mile 99.5

- What clues can you find in the image, text, and photographs that might explain why Crystal Rapids is located in this place?
- What are some of the landforms you can identify in the image?

Stop 14D: Mile 157

- What layer should you find above the Muav Limestone?
- What do you know about limestone that might explain the interesting features found in Havasu Canyon?
- In particular, how do you think this round-shapes in the limestone were created? (Use the resources book to help you form your ideas. Don't be afraid to be creative, but try to find some support for your ideas.)

Stop 15B: Mile 179

- Take a moment to rise up farther above Grand Canyon, using the Google™ Earth controls. What do you notice about the area around Vulcan's Throne?

Stop 15D: Mile 178

- Record observations and sketches of the Google™ Earth image. (Note: The rock columns are about 4 meters high and 15 to 50 cm in diameter.)
- What type of rock do you think you would find here?
- What type of landform is Vulcan's Throne?
- What processes caused the formation of Lava Falls Rapids and made it such a difficult rapids to navigate?
- If there are sedimentary rocks in this area, are they older or younger than the other rocks? How do you know?

Stop 16: Mile 239.7

- What are some adjectives you could use to describe Separation Canyon?
- Is there anything unusual about Separation Canyon that might help you figure out why it formed here?
- Rise above the canyon to get a view of the larger area around the canyon.
- What other landforms or land features do you see that might provide some clues to why Separation Canyon appears as it does?
- Why do you think the members of Powell's party who left the expedition did so here?

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