

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## Canyonlands National Park

Canyonlands National Park is located in southeast Utah. The parallel valleys visible in this image are called grabens. Grabens form when the earth's surface is being stretched. The stretching creates faults along which blocks of land drop downward. Notice that the valleys are shaped differently than those formed by erosion around a river.

The rock layers visible along the graben walls are gently dipping towards the west (down in this view). The sandstone that makes up the uppermost layer of the surface between the grabens is being cracked and pulled apart as it slides towards the Colorado River. This has been possible because the sandstone layer sits on top of relatively slippery salt layers that are slowly moving towards the Colorado River.

1. In which direction is the Colorado River flowing through this image? \_\_\_\_\_

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2. What could have caused the alignment of the two narrow valleys at C27 and D30?

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3. What will eventually happen to the rock layers at F12? \_\_\_\_\_

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4. Why are the floors of the grabens able to sustain grassy plants, while the higher areas between the grabens appear to have little or no vegetation? \_\_\_\_\_

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(Continued...)

5. The Needles (R32) are spires of rock topped by resistant layers. The erosion of the surrounding rocks has left only these tall narrow vertical shapes. In what way have the Needles been affected by the formation of the grabens? \_\_\_\_\_

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6. Why would a heavy rainstorm in this region be likely to cause a flash flood in Lower Red Lake Canyon (C13)? \_\_\_\_\_

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7. In what ways does the Colorado River affect the formation of the grabens? \_\_\_\_\_

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