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The Use of Color as a Third Dimension on Maps[1] XIMENA CID, RAMON LOPEZ, Univ. of Texas at Arlington, STEVEN LAZARUS, Florida Institute of Technology — This study investigated student understanding of the use of to represent height and temperature. Fifty-four undergraduates were surveyed. Eight students were chosen interviewed to investigate in more detail the responses provided on the surveys. We found that students have an embedded color scheme for temperatures, with red representing hot and blue representing cold (as expected), but there was no embedded scheme when color was applied to height. We found that students did not have a preference when viewing a topographic map with different color schemes, but did prefer the color scheme of the figure that they viewed first. We observed that the students did have an prior notion of what the topographic figure was representing, and tried to fit the color scheme shown to match their idea. During the interviews we also found that even the slightest deviations from a specific color scheme gives rise to confusion. These results, therefore, show the importance of detail consistency when using visualizations in a lecture where the population is composed of novices.

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