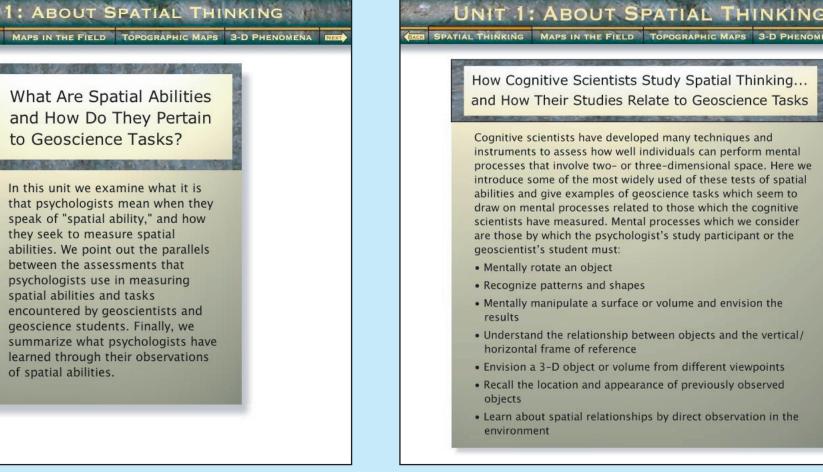
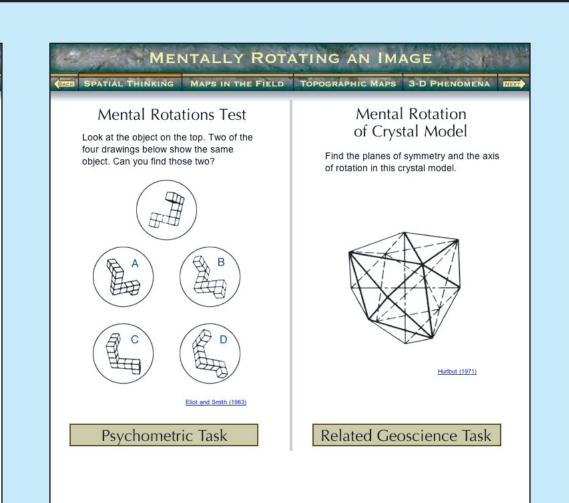
Why Some Students Have Trouble with Maps and Spatial Representations: An On-line Tutorial for Geoscience Faculty

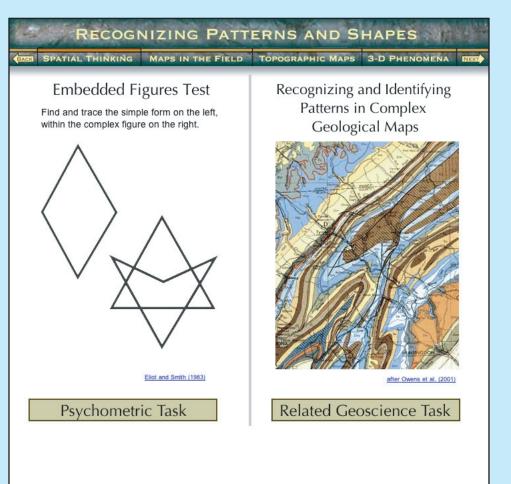
Kim Kastens and Toru Ishikawa kastens@ldeo.columbia.edu ishikawa@ldeo.columbia.edu

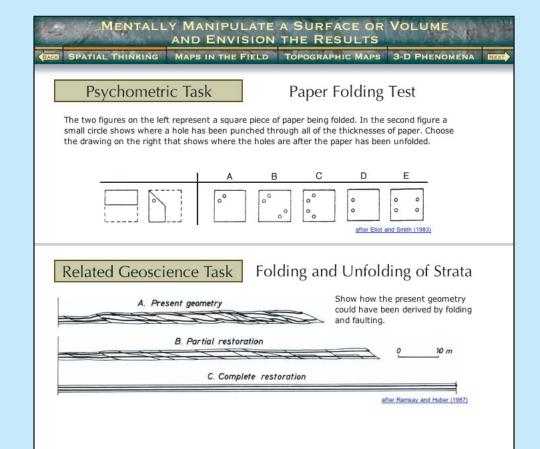
Lamont-Doherty Earth Observatory of Columbia University, Rte. 9W, Palisades, NY 10964

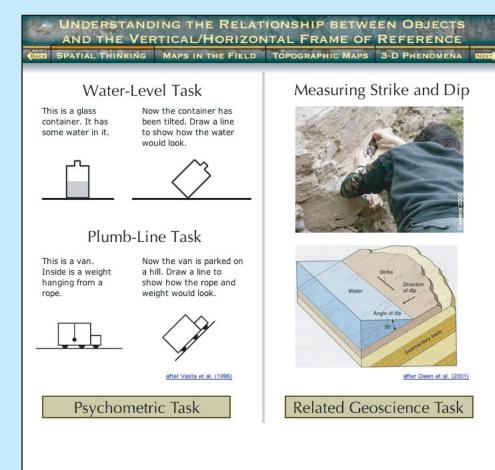
and How Do They Pertain to Geoscience Tasks? In this unit we examine what it is that psychologists mean when they speak of "spatial ability," and how they seek to measure spatial abilities. We point out the parallels between the assessments that osychologists use in measuring spatial abilities and tasks encountered by geoscientists and geoscience students. Finally, we summarize what psychologists have learned through their observations of spatial abilities.

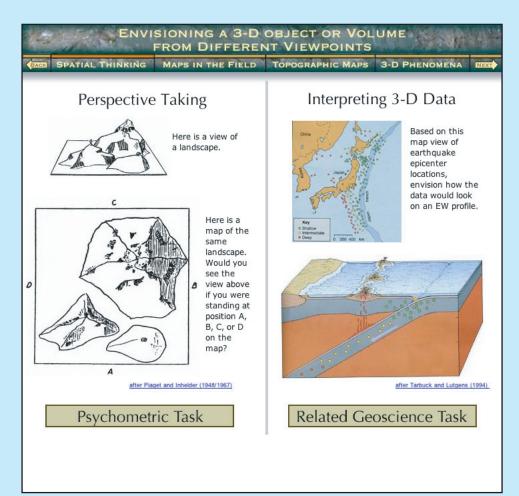


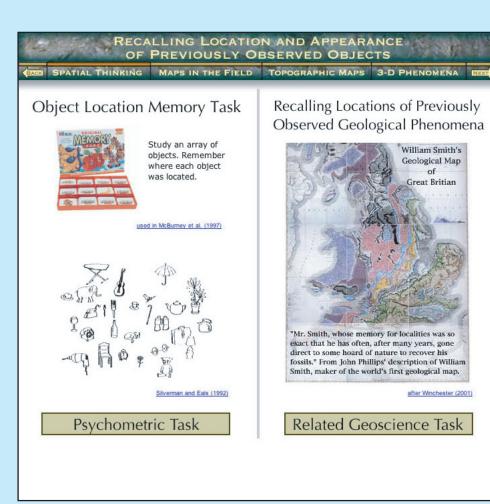


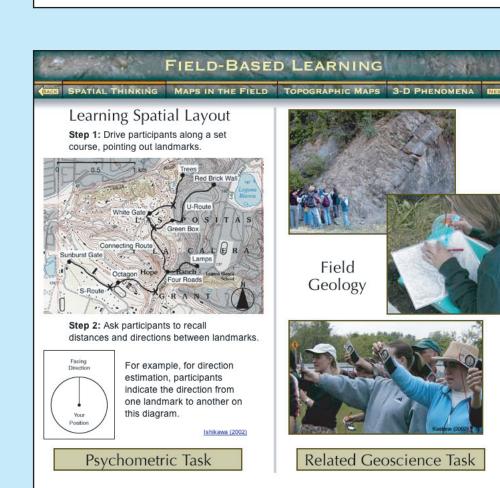


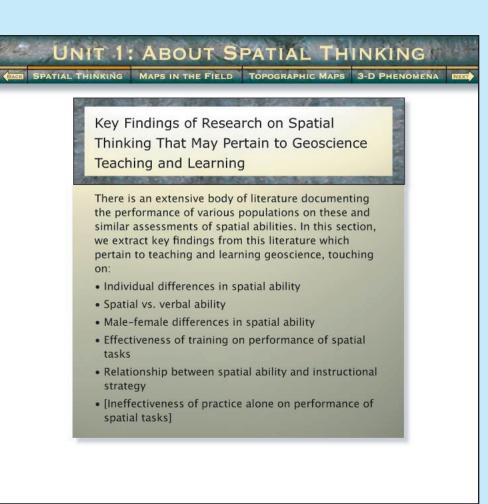


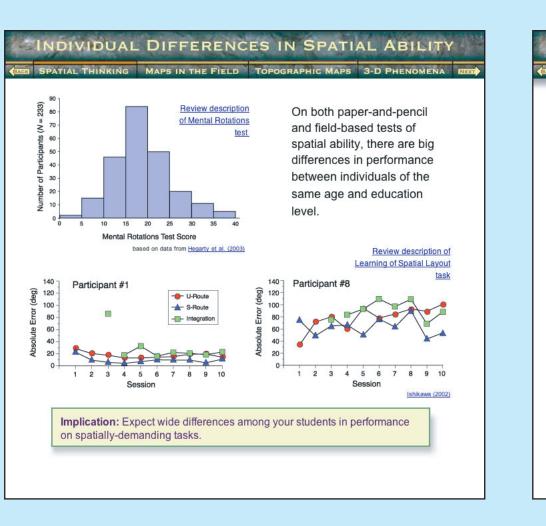


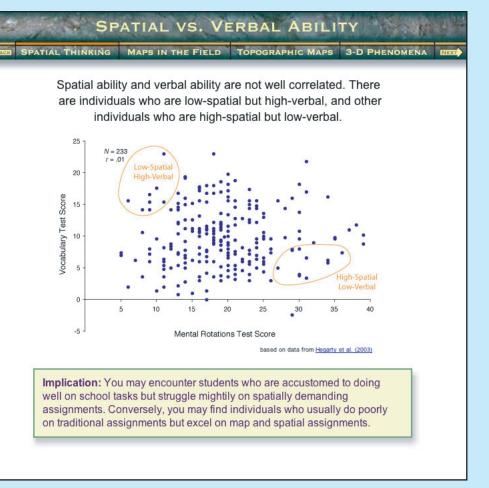


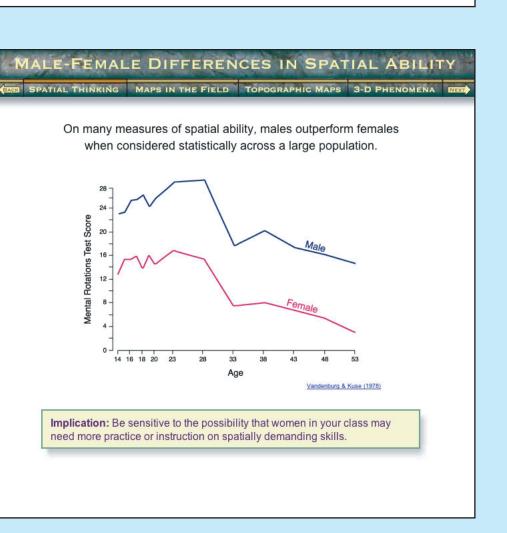


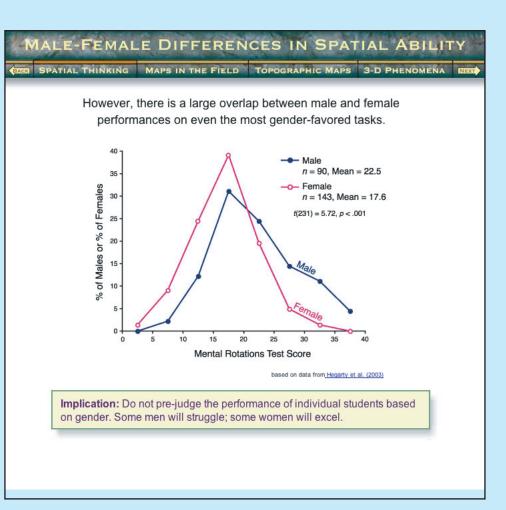


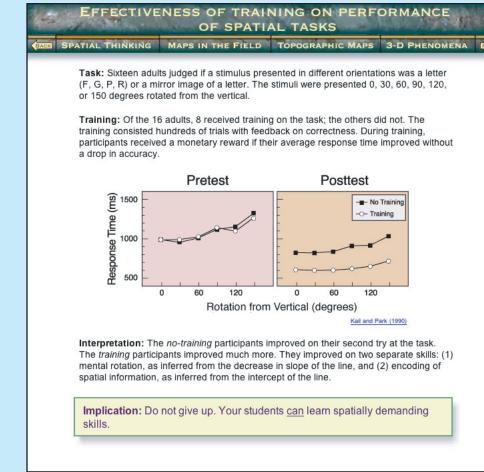


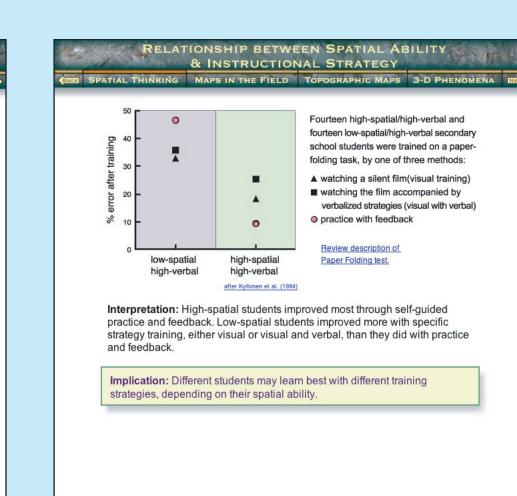




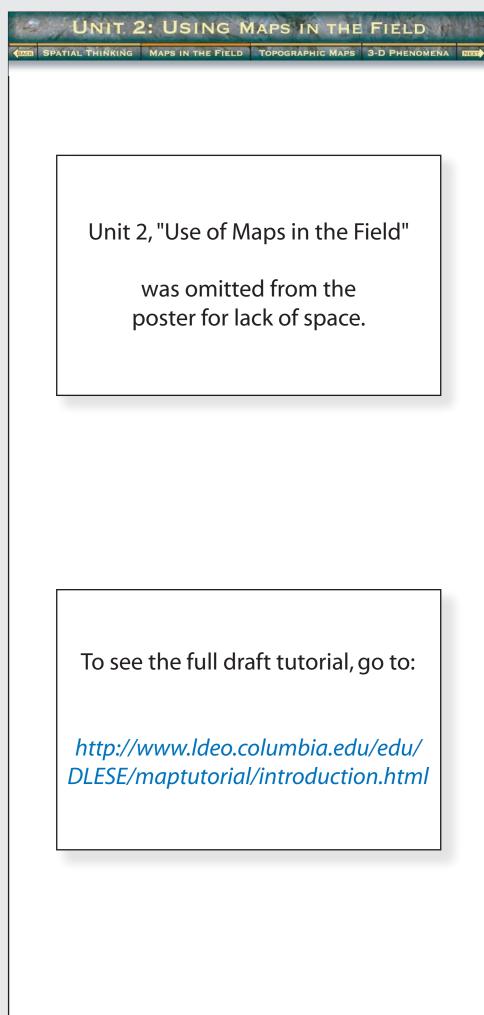




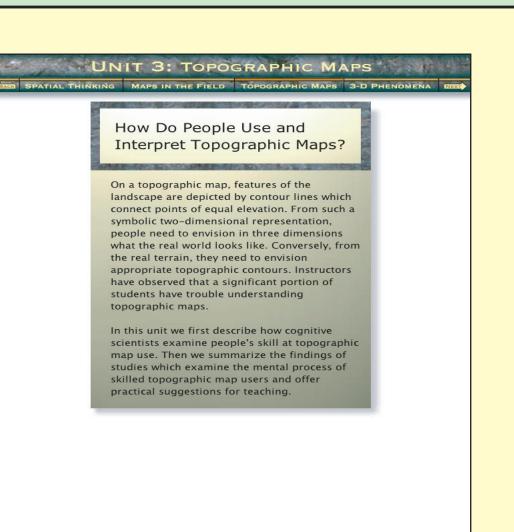


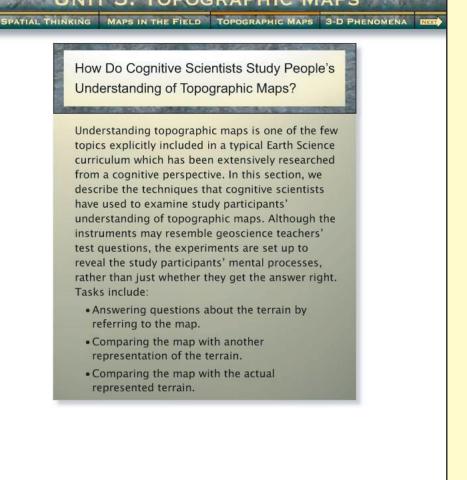


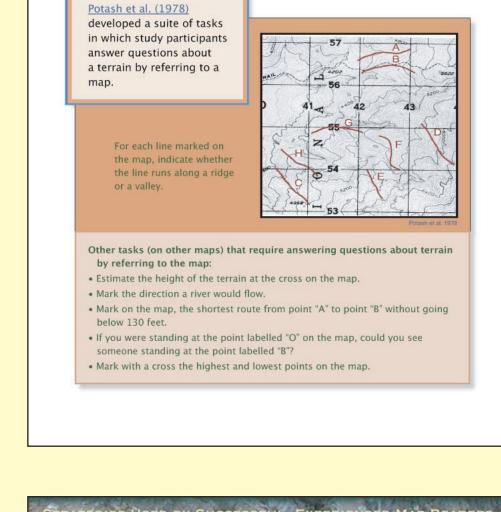


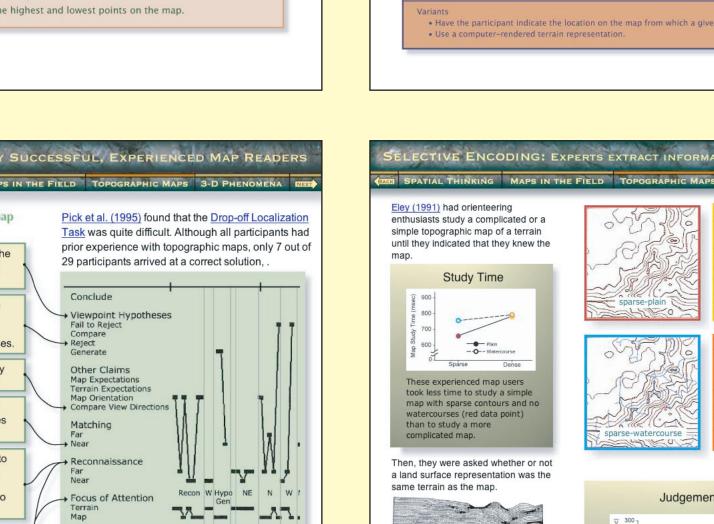


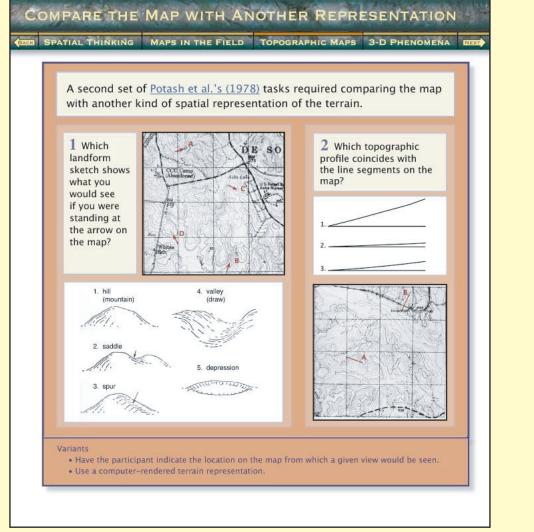


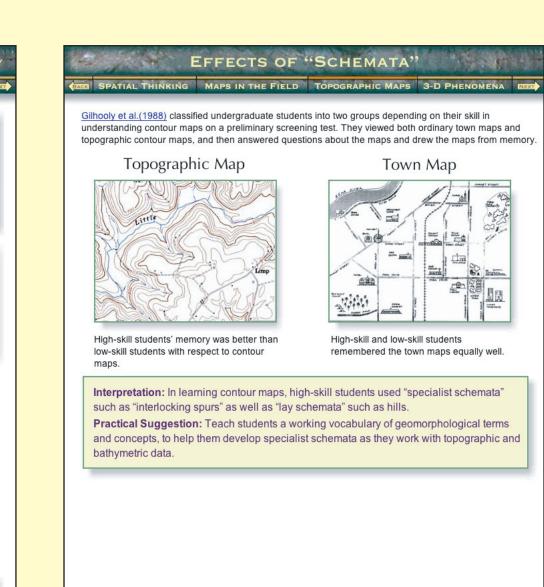












Montello et al. (1994) asked participants to view and

They were then shown a topographic map from

which all nontopographic information had been

removed, and asked to choose one of three

viewing directions in which they

thought the scene was photographed.

by an arrow. They were then asked to choose

thought was photographed from the direction

remember a landscape photograph.



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Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

To see the full draft tutorial, go to:

http://www.ldeo.columbia.edu/edu/

