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Shore, L.S.; Erickson, M.J.; Garik, P.; Stanley, H.E.; Taylor, E.F.; Trunfio, P.A.; Hickman, P.
Learning fractals by 'doing science': applying cognitive apprenticeship strategies to curriculum design and instruction.

Interact. Learn. Environ. 2, No. 3-4, 205-226 (1992).

Science research professionals originated an education innovation project that adapts the mentoring model of graduate study in science to the high school, closely coupling experiment and computer visualization models devised originally for science research in natural or random fractals. Educational researchers who joined the project helped to interpret the effort in terms of „cognitive apprenticeship’, a teaching paradigm already known in the cognitive research literature. This article traces the evolution of the materials informed by this paradigm and the results of two sequential trials of a fractal dimension unit in a suburban high school. In the 2nd-year trial, students began to act as independent investigators and the teacher gradually and spontaneously adopted the role of mentor. (orig.)

Classification: D44

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