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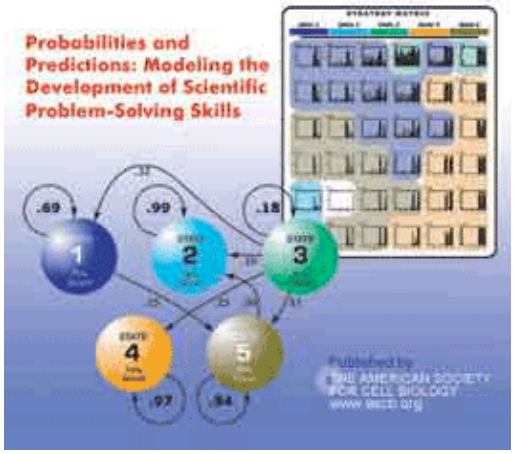

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FEATURES

HHMI
HOWARD HUGHES MEDICAL INSTITUTE

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Francisco); ISBN: 0–7879–1030–9
by Joyce K Ono

- **Carlson Composes a Classic Review of: *Mendel's Legacy: The Origins of Classical Genetics,* by Elof Axel Carlson; 2004; 332 pp.; Cold Spring Harbor Laboratory Press (Cold Spring Harbor, NY); ISBN 0–8796–940716**
  by Millard Susman

ARTICLES

- **Probabilities and Predictions: Modeling the Development of Scientific Problem-Solving Skills**
  by Ron Stevens, David F. Johnson, and Amy Soller

- **Developing Information Fluency in Introductory Biology Students in the Context of an Investigative Laboratory**
  by Gary J. Lindquester, Romi L. Burks, and Carolyn R. Jaslow

- **Understanding of Genetic Information in Higher Secondary Students in Northeast India and the Implications for Genetics Education**
  by Ansuman Chattopadhyay

ANNOUNCEMENTS

September 3–7, 2005, Sydney, Australia
15th International Society of Developmental Biologists Congress

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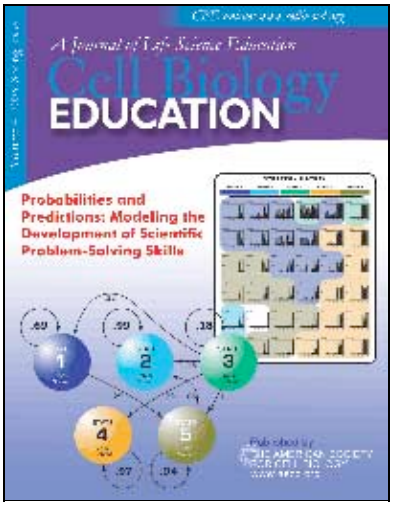

Modeling the development of scientific understanding. This model illustrates the most likely strategic pathways students take as they learn how to solve problems in molecular genetics. The matrix shows the 36 most frequent strategies (as identified by artificial neural network analysis) students used while analyzing simulations. The state transition diagram shows the most likely pathways students will follow in their problem-solving strategies. Students in State 2 tend to guess at the solution and are not likely to change their approach without intervention, whereas students in State 3 tend to attack the problem in a variety of ways, progress to even more effective strategies (States 1, 4, and 5), and increase their chances of solving the problem.