

BSC and SEPA* Grant Offering Summer 2007 Graduate-level course for Middle School Teachers

Bridgewater State College is offering BIOE 513-GR1, DNA, Protein and Cell Biology in the *Whale of a Mystery*, a Biology course directed to Middle School Life Science topics as determined by the Massachusetts Curriculum Frameworks. Earn three graduate credits and learn how to enhance teaching and learning using the BSC CityLab model applied to in-school thematic investigations and curriculum that includes sciences, mathematics and the language arts.

Measurement

These modules develop measurement and explore density of objects and fluids using micropipets and balances. Topics include metric conversions, accuracy of instrumentation.

Cellular Biology

Tissue Identification. This module is based on the structure of cells, the specialization of cells and the relationship between their structure and function. Techniques include phase and fluorescent microscopy.

Protein Biology

Protein Quantitation for Whale of a Mystery. This module is an updated and thematic version of the popular Boston University School of Medicine's CityLab *Crucial Concentration* protein quantitation assay. **Protein fingerprinting** in the study of endangered animals. Techniques include polyacrylamide gel electrophoreisis.

Molecular Biology

Using DNA to Discover Phylogenetic Relationships. This module is an introduction to phylogenetic relationships using computer searches of DNA databases (BLAST searches) and analysis of DNA homology between related organisms.

Theory and concepts behind these modules are included as well as the introduction of Lending Lab materials. Lending Labs may be supported in specific school districts following completion of the course.

<u>**DATES:**</u> June 25, 26, 27, and 28, 9am-4pm each day. Also required is attendance for one day during the July 2007 Whale of a Mystery summer program for middle school students. In addition, two mandatory follow-up half-day classes will be scheduled on September 29th and November 3th, 8am-12pm.

LOCATION: Bridgewater State College CityLab, room 312 in the Moakley Technology Center

COST: \$150 for three graduate credits. Participants will also keep distributed materials. A NIH grant is subsidizing the cost of this course.

For further information contact BSC CityLab at 508-531-2635 or <u>CityLab@bridgew.edu</u>
To learn more about BSC CityLab Activities visit our web site at webhost.bridgew.edu/CityLab.
To register for this course contact 508-531-6010 or OffCampus@bridgew.edu

Enrollment is limited. Please register early.

*SEPA, is a Science Education Partnership Award through the National Center For Research Resources, National Institutes of Health

☐ Black, Non-Hispanic information requested. ☐ Asian or Pacific Islander Account Number: ☐ Hispanic Expiration Date: ☐ Cape Verdean □ Non-Resident Alien ☐ White, Non-Hispanic Billing address zip code of cardholder: Total payment Enclosed \$ □ Other Registration forms without payment information will be returned. SEX 🛮 M 🔲 F