

Michelle Marcil-Spicer

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Professional Profile

Eager to bring K-12 and Postsecondary life- and earth-science students into the twenty-first century using a unique combination of education experience coupled with a professional background in investigative science.

- Masters Degree in Secondary Science Education and Bachelors Degree in Biology and Chemistry.
Master's Thesis: *Integrating Reading Strategies with the 5E Instructional Model into High School Biology Lessons*.
Published 2007
- Experienced Scientific Researcher – trained in DNA sequencing using PCR and other biotechnological applications.
- Dedicated to enthusiastic and dynamic teaching as a means of creating and nurturing a lifelong love of reading, knowledge and learning in young adults.

Education, Honors, and Certifications

Master of Science in Science Education

Montana State University, Bozeman, MT. 2007

Texas Teacher Certification Coursework

University of St. Thomas, Houston, TX 2004

Bachelor of Arts in Biology, Minor in Chemistry

Central Washington University, Ellensburg, WA 1999

Professional Certifications

TX Teacher Certification, Science Composite (Grades 8-12). 2004

TRUGene Genotyping Certification. 2000

Key Qualifications

Certified in Secondary (Grades 8-12) Science Education

Design, plan, and instruct secondary biology and chemistry courses using a wide variety of teaching aids, motivational and implementation strategies to engage students in active learning.

Incorporate learning modality principles into classroom and individual instruction. Develop and conduct advanced life-science laboratories demonstrating use of modern DNA sequencing techniques.

Implement technological approaches to subject material. Research educational resources on the Internet. Assist with information retrieval *and interpretation*.

Course Related Student Achievements

□ Houston Arboretum Nature Photography Competition: 3 students Honorable Mention. 2008 □

Student published in *Popular Science Magazine*. 2007

□ International Science Poetry Competition: 1 winner, 4 commended. 2007

Employment

Professional Teaching Positions

- **Houston Community College, Houston, Texas. 2017 to present**

- **Memorial High School, SBISD Houston, Texas. 2010 to present**

At Memorial HS, pioneered a Dual Credit biotechnology laboratory course using modern protocols and applications. Students learn about lab techniques, equipment, and applications such as bioremediation, GMOs, software modeling, recombinant genetics and genomics, and forensics. Responsible for independent design, development, and execution of Physics and Biotechnology on-level and honors-level curriculum meeting the Texas TEKS and National Science Education Standards. (<https://sbisd.itlearning.com/Marcil/classroom/>)

- **The Kinkaid School, Houston, Texas. 2005 to 2009**

Responsible for independent design, development, and execution of Biology I on-level and honors-level curriculum meeting the National Science Education Standards. Developed student reading extension for the Papadopoulos Fellowship. Developed specialized advanced PCR & Biotechnology laboratory curriculum using a state-of-the art Thermocycler. Other laboratory instruction includes use of an outdoor classroom. (<http://www.kinkaid.org>)

- **Cypress Ridge High School, Houston, Texas. 2002-2005**

Responsible for design, development, and execution of vertically and laterally aligned Integrated Physics and Chemistry curriculum meeting Texas state TEKS/TAKS requirements with a teaching team of 7 instructors. Direct instruction of 120 students (5 sections) per year. Faculty sponsor for the Cy-Ridge Student Council; accountable for supervision of all facets of campus Homecoming celebrations, charity projects, and class officer elections. Recently promoted by Cypress Fairbanks ISD to Professional Development Assessment System (PDAS) Plan II. Fully state qualified in Pedagogy and Professional Responsibilities (PPR). (<http://schools.cfsd.net/cyridge.net/home.stm>)

Professional Scientist Positions

- **Stanford University, Stanford, California. 1999-2001**

Research Assistant, Center for AIDS Research (CFAR). Accountable for support in the development of microbiological laboratory and research experiment protocols, execution of controlled studies, and recording/synthesizing of experiment and study results pertaining to HIV/AIDS research. OSHA Haz-Mat training in health, safety and environment procedures for Level III infectious disease facilities. Acquired formal certification in viral genotyping, phenotyping, and gene sequencing by Visible Genetics, Inc. (<http://www.stanford.edu/~siegelr/HIV.html>)

Professional Affiliations

Reviewer for *The Science Teacher* Journal

Member, National Science Teachers Association

Campus Representative, Association of Texas Professional Educators (ATPE)