Heather Sullivan

Albuquerque Academy, Albuquerque, NM

Middle School Math Education

7th Grade Pre-algebra and Algebra

Disney Teacher Awards

CELEBRATING CREATIVITY IN TEACHING

2005 Honorees

"My teaching revolves around the broad but breathtaking idea that mathematics describes relationships between everything imaginable. We collect giant sunflowers from our seventh grade community garden in the fall and use the tens of thousands of seeds to make connections between estimation, counting strategies, scientific notation, and the Fibonacci sequence. We write and perform skits to bring mathematical identities and inverses to life. We fill an entire wall with our drawn, scaled up version of a small photograph. We read examples of fictional literature that incorporate mathematics, including excerpts from *Alice in Wonderland* and *Through the Looking Glass, Flatland*, and *The Number Devil*. We compose our own music, using fractions to create complex rhythms. We construct geodesic domes large enough to fit several students inside by fastening rolled tubes of newspaper together. We invite guest speakers from the Fractal Foundation and learn to use software to navigate our way through a visually astounding world that we actually create by reiterating algebraic equations."

"Seventh graders are fascinating learners in part because their minds are just beginning to juggle the abstract with the concrete. As an algebra teacher, I know that creating real-life representations of abstract concepts is crucial to maximizing students' mathematical and problem-solving success." – *Heather Sullivan*

"The decibel level inside the car when I drive my seventh grade daughter home from school has grown with each passing week. With frequency I hear, 'You won't believe what we did in math today...' Active participation, student exploration and student inquiry are hallmarks of Heather's program. Through math games, hands on activities, seventh grade real world experiments, deductive reasoning and problem-solving, the students achieve algebra intelligence. And at a time in their lives when girls sometimes downplay their intellect to gain peer approval, Heather has been a fantastic its-great-to-be-smart-in math role model." – *Marsha Freedman, parent of current student*

Other Highlights:

Graduate student, University of New Mexico, candidate for MA in Secondary Education, emphasis in mathematics

Co-sponsor/Coach, MathCounts

Participant in school-based summer grant work (Problem-Solving in the Middle School Math Curriculum, 2003; Philosophy of the Middle School, 2005; Planning and Supporting Interdisciplinary Work in the Seventh Grade, 2005)

Member, New Mexico Council for Teachers of Mathematics

University of New Mexico Mathematics Teacher Academy (2002-3 and 2003-4)

Member of Sigma Xi Research Society

BA in Biology, with honors, Brown University (1998)

Primary author of articles in *Journal of Arid Environments* and *Journal of Arachnology*

Years Teaching: 5 **Average Class Size:** 18 **Classes Taught Per Day:** 4

School's Percent of ESL Students: 2 **School Type:** Private, Medium-Small City **Type of Class:** Self-contained