

# THE SCIENCE CONTINUUM

Elementary, middle level science hooks Tulsa students, primes them for what lies ahead in high school



## Plant the seed early

### About the School

- Monte Cassino School
- Tulsa, Oklahoma
- Grades: Kindergarten-8
- Pitsco Education Curriculum: Elementary (Missions) and middle level (Modules) science

### Test Results

2008 Iowa Test of Basic Skills  
(National percentile rank in science)

- Second Grade, **95%**
- Third Grade, **99%**
- Fourth Grade, **99%**
- Fifth Grade, **98%**
- Sixth Grade, **98%**
- Seventh Grade, **97%**
- Eighth Grade, **98%**

**Tulsa, Oklahoma** – Many kids fear science. They dread the periodic table, the memorization of seemingly foreign terms, and that heavy science textbook. But there's more to science, and the sooner students experience the amazing and engaging side of this ever-changing subject, the less likely they'll be to fear it.

Instilling a love for science at an early age lessens the chance that kids will ever reach the fear threshold. Teachers and administrators at K-8 Monte Cassino School in Tulsa, Oklahoma, have implemented Pitsco Education Missions and Modules – as early as the first grade – in an effort to instill a “love for science” before fear even gets a chance to enter the equation.

First through fourth graders enter a dedicated science lab every week to explore hands-on activities, including four-person Crew Mission topics such as Earth Rocks, Bug World, Air Power, Animal Adaptations, and Epidemic. Middle level students study

earth and physical science via Pitsco Education Modules.

“They especially need to start science as early as they can,” said Monte Cassino Principal Lisa Beardshear. “We get our first graders in here as much as our fourth graders. I think you need to get them a good base and get them to enjoy it and not be afraid of it because so many people are afraid of science.”

### Test scores and engagement

Test scores reflect that the Missions and Modules programs have made a difference in the six years they've been utilized at Monte Cassino. Students recently finished near the top on the science portion of the national Iowa Test of Basic Skills (see “Test Results” section).

Before young students can learn, they must become engaged, and Pitsco Education curriculum engages. Facilitator Janou Farrell says her students often



Facilitator  
Janou Farrell

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go beyond what's intended in the Mission lessons. "If you give hands-on, kids discover more through trial and error, rather than me tell them, 'this is what it is. This is the answer.' They can discover for themselves. And they often find out things other than what they were trying to find out to begin with. They actually find out more."

School Director Sr. Mary Clare Buthod, O.S.B., can see that the program is working as soon as she walks into Farrell's classroom. "They never look up, always focused. They're just totally engrossed. I think the intensity of the workload is not quite as strong as if it were just paper-pencil in the classroom, which I like a lot. They can use their thinking skills and work together. That's why I love this way of learning."

### Cooperative learning

Students work in Crews of four at the Series III and IV Missions, and they take turns



filling the roles of Commander, Communications Specialist, Information Specialist, and Materials Specialist. They are instructed how to work cooperatively to resolve issues before calling on their teacher to help.

"Usually at the beginning of the Missions, before we even start them, I kind of give them tools for how to resolve something," Farrell said. "They don't need me to resolve all their

issues. Even in the first grade they know what they're supposed to be doing, and they get really good at it. It's quite fun, especially after the first few rounds."

### Blended curriculum

By spending one semester in a hands-on Pitsco lab (Earth science Modules in seventh grade and physical science Modules in eighth grade) and one semester in a traditional classroom where the textbook is the primary teaching tool, students at Monte Cassino School are hit with science from all angles (text, audio, video, hands-on) and in various ways – teacher-to-student, computer-to-student, and student-to-student.

It's all about reaching students and spurring an interest in science that they can deepen when they enter high school. Of course, top-line test scores don't hurt either. In 2007-2008, Monte Cassino seventh graders finished in the 97th percentile on the Iowa Test of Basic Skills and eighth graders were in the 98th percentile.

The lab-and-book combo "works great with my curriculum. I love it," said eighth grade science teacher Jessi Monroe. "The first semester we do strictly chemistry, so I teach them about matter, how matter reacts with each other. We get a good base on the chemistry. Then we move across to the (Module) lab and start the physics part of physical science. Physics lends itself to so many laboratory activities, and they get to experience so much more over there than I would be able to do in a classroom." 

