



ACADEMIC PROGRAM

SCIENCE

Devised by Scientists - Unlike many schools where teachers have devised the course of study, the science curriculum of the Academy has been framed by actual scientists and by those experienced in the practice of science.

The Science “Un-Fair” - Many schools model their science program after competitive athletics by holding an annual “Science Fair.” Students are encouraged to compete against each other and the single winner (usually assisted by a talented parent) moves to the district level of competition, and then to state and a final national “play-off” - just like the Super Bowl

You’ll find no counterpart to this model in authentic scientific inquiry—it is an artificial construct which excludes too many children and sends the wrong message to them—a message of rejection and failure.

Real science is actually conducted as a *cooperative and inclusive* endeavor and it should be presented as such to each new generation of students.

Cooperative Process of Discovery - The Academy teaches science as it is actually practiced—as a cooperative process of guided discovery that is based on several well-established precepts known together as the “scientific method.”

Whenever possible, a fact of science is learned by experimentally testing a theoretical hypothesis by teams of students. These teams present their findings at “conferences” and

decide whether the hypothesis should be accepted, rejected, or retested based on the evidence they have gathered.

In this way, students truly experience science—the satisfaction of cooperation, the excitement of discovery, and the discipline of rigorous observation—as it is practiced by scientists throughout the world.

Integration throughout the Curriculum - At the Academy many of the basic facts of science are learned within the context of other academic subjects. For example, scientific terminology is

included in vocabulary lessons, i.e., “A *force* is a push or pull.” The impact of science on the our civilization is explicitly integrated into history lessons and social studies. No doubt lesson plans in the future will include both the science of hurricanes and the historical and social impact of Hurricane Katrina.

The academy introduces scientific laws and concepts beginning in kindergarten. The First Law of Thermodynamics requires only addition and subtraction to understand the conservation of energy. The actual calculation of “work” and “energy” can be taught once students master multiplication.

Simple, fundamental concepts can yield insight into our natural world and conservation efforts we can make to preserve it. Why delay teaching these concepts until high school physics when they can be easily grasped by children in elementary school?

