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LEARNING BY THE LIGHT OF DAY

Stone Mountain Elementary School

Douglas County, Colorado

The Challenge: Bringing Natural Light to Class

Imagine a classroom where soft natural light bathes students and teachers, electric lights turn off automatically when there's ample daylight, and children focus intently on their studies. That's exactly what you will find at an innovative new elementary school in Douglas County, Colorado.

Studies have shown that there is a correlation between daylight and learning. Under natural light, kids are more focused and have as much as a 21 percent improvement on standardized test scores. At Stone Mountain Elementary School, the team of RB&B Architects and Hutton Architecture Studio sought to create a school building that fostered learning by bringing daylight into every space.

- Unique program for United Power customers
- 43rd school to be built in the Douglas County School District
- \$20,000 grant from GEO to improve initial building design



Lighting by the Light of Day (5:37)

The Solution: Daytime Lighting Systems

Knowing that the State of Colorado is supportive of sustainable buildings, Douglas County and its design team approached the GEO to request a \$20,000 grant to make their prototype design even more energy efficient.

Stone Mountain Elementary School is a high performance building that incorporates many energy efficient and cost-effective features. The building is shaped and placed to take advantage of natural light. It relies on daytime lighting systems – solar tubes on ceilings that capture natural light from skylights or the many windows. Windows have exterior sunshades that block the direct sun, but gather daylight. As a result, classrooms, the cafeteria and library are filled with natural daylight much of the time.

"Stone Mountain Elementary has seen energy savings of \$50,000 a year over a typical elementary school."

- Bill Moffitt, Executive Director Facilities Management

The Result: More Light, Lower Costs

This innovative school building costs less to build than a more conventional design. In addition, Stone Mountain saves \$50,000 a year in energy costs over a typical elementary school building, allowing the school district to operate more efficiently. Automatic systems save energy by turning electric lights off when they are not needed. In fact, at midday it's not unusual to find no electric lights on at all.

Besides providing a better learning environment, the daylight-filled spaces themselves are lessons. Exposing kids to new developments in energy efficient design helps teach them to be responsible now and introduces them to the energy solutions of the future.