Green Schools!
LEED Schools throughout Arizona

Schools across Arizona are becoming more energy efficient, going green, and achieving LEED (Leadership in Energy and Environmental Design) certification. The US Green Building Council established the LEED certificate or tier system to create a framework that encouraged innovative, environmentally-friendly, and cost-saving buildings. A building that uses sustainable measures from building construction to building maintenance to try to decrease the environmental impact can become LEED certified.

There are different levels of certification gained through a point system. The order as follows is from smallest to highest; certified (40-49 points), silver (50-59 points), gold (60-79 points), platinum (80+ points). A building earns points through a variety of categories within innovative designs and solutions that protect the environment and public health (USGBC).

Here are just a few of the Arizona schools that have joined the LEED movement.

Image retrieved from Googlemaps.com

Davidson Elementary School Tucson, Arizona

In 2006, Davidson Elementary School became LEED certified. At first glance, Davidson is distinguishable with its solar panel shade and parking lot. Beyond the solar panels, Davidson might look like any other elementary school. However, Davidson Elementary is leading the green revolution by demonstrating that being a green school saves money, is innovating, provides healthy spaces, and unites community members.

Davidson's design used as much recycled and local materials as possible and incorporated energy and water efficient appliances. To decrease the waste output during construction, Davidson incorporated recycled and local materials. First, the school used old materials, then used an integrated material, and finally minimized unnecessary decorative finish.

The most fascinating green feature is the use of recycled blue jeans—a material which would end up in a landfill—that now insulates Davidson. In addition, Davidson has implemented energy and water efficient technology such as metered faucets, waterless urinals, which save 160,000 gallons of water in a school year, and an air conditioning system that saves 25 percent in energy costs per year compared to other similar buildings (ADEQ). Altogether, Davidson Elementary energy efficiency measures save approximately $57,000 compared to other schools in the Tucson Unified School District (ADEQ).

The initiative to construct Davidson Elementary School as a green school benefits the environment and saves the district lots of money, however, another impactful benefit is sharing this green space with the

community. Davidsons's multipurpose room and library are open to the community for meetings or as a performance space. Green designs like that of Davidson High demonstrate how a school can become green, benefit the community, and save money.

Image retrieved from http://www.egreenideas.com/portfolio/desertedge/

Desert Edge High School Goodyear, Arizona

In 2006, Desert Edge High school became a LEED Silver school. The combination of bike storage, low-water appliances, and more energy efficient devices led Desert Edge to receive the second highest certification.

The Desert Edge High School second phase expansion took a step closer to a more environmentally-friendly building by improving its water efficiency with low water use landscaping and further reduced water use with low-flow fixtures. In Arizona, landscaping is crucial for water conservation and Desert Edge High implemented beautiful desert landscaping to decrease water use. In addition, the school used low-flow shower and handwashing stations, and waterless urinals. Previously, the Agua Fria Union High School District to which Desert Edge High belongs used some “water saving practices” (ADEQ). However, with the changes Desert Edge High made, the district is now saving more than 1,000,000 gallons of water each year (DEQ).

In addition to water efficiency, Desert Edge High has become more energy efficient through shading devices, overhangs, using sensors, and implementing a meter to track electricity consumption. Using shades and overhangs helps to keep the school cooler and decrease the energy the air conditioner uses. Desert Edge also implemented occupancy sensors that turn off lights in rooms or spaces that are not in use. While the changes Desert Edge High implemented may seem insignificant, all together, they decreased the school’s energy consumption and improved its energy efficiency, which now saves Desert Edge $58,000 per year!

Desert Edge High School has demonstrated how going green is not a costly, new idea. To the contrary, Desert Edge is saving thousands of dollars a year while minimizing its environmental impact. The LEED framework provided Desert Edge the opportunity to reduce its environmental impact and surpass the first tier.

Arizona State University- Tempe, Arizona

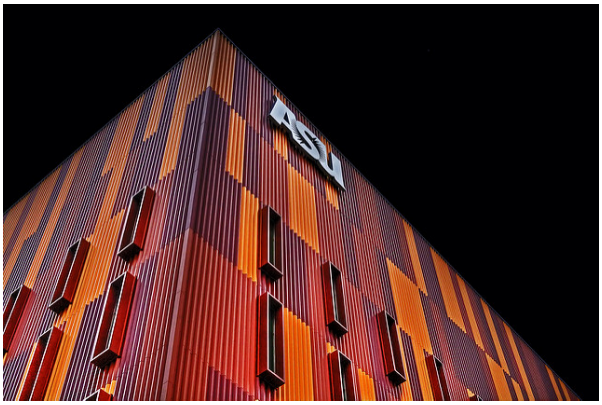

Photo by Michael Ruiz.

Since 2006, Arizona State University (ASU) has built 28 LEED buildings, which range from dorms, dining halls, recreational spaces to academic and mixed use. In total, almost 17 percent of all of ASU's buildings are LEED -- 3 platinum, 27 Gold, 16 Silver, and 1 Certified (28 of the buildings are ASU's and the remaining are buildings owned by different partners or are leased buildings). ASU has been leading in environmental design and states that it will continue to aim for LEED silver certification for future building construction. To learn more about the LEED building on ASU's campuses go to https://cfo.asu.edu/leed.

Links used

http://legacy.azdeq.gov/ceh/green1.html

https://new.usgbc.org