Valley Catholic Elementary and Middle School

Green & Sustainable Building Features

Roofing material:

- *White cap sheet* – The upper roofs are made of a white material that reflects light instead of absorbing light. By reflecting the energy from light, the building stays cool during the summer reducing the energy costs of air conditioning.
- *Green roof* – The roof reduces rainwater runoff by absorbing and using the water for growing plants. Our roof is planted with sedum which attracts pollinators and butterflies. Any water that does runoff is cleaner and cooler. In addition to reduction water pollution, the green roof reduces heat loss in the winter and keeps the building cool during the summer months.

Windows:

- *Sunblock* – All south-facing windows are coated with a sunblock to reduce glare and heat from the sun.
- *Light deflectors* – The library windows are lined with curved walls to defect more natural light into the library.
- *Large windows* – Windows are large throughout the building to maximize natural lighting, reducing the energy costs.
- *Smart windows* – All windows are attached to the HVAC system. If a window in a room is open, the HVAC shuts off to that room preventing lost heating or cooling. Teachers can control the natural flow of air in their classrooms.

Reduce, Reuse, and Recycle:

- Recycled denim jeans were used to insulate the walls of the school.
- Reduced use of petroleum based products was obtained by using bio-based tile floors made from corn.
- Recycled and reused excavated materials from the building site which included the old oak trees. These 200+ year-old oaks were milled and incorporated into the woodworking found throughout the school.

Landscaping and bioswale:

- Sustainable plantings of native trees and shrubs that require little water and maintenance.
- All water from the roofs flow through rocks and landscaping using the water, slowing it down, and cooling it. Any excess water is collected in the bioswale on the south side of the building. This excess water is used by more water-loving plants and further slows the water and cools the water. The idea is to reduce the volume of water coming off the building that flows out to the creek running along the west edge of the SSMO campus.

Water and lighting efficiency:

- Water-conserving fixtures in all bathrooms
- Occupant sensing lighting ensures efficient use of lights

**Compiled by June Poling, Elementary and Middle School Vice Principal*