

Hood River Middle School

With a growing student body, historic Hood River Middle School in Hood River, Oregon, was faced with adding more classroom space. Science teacher Michael Becker had already established a curriculum that incorporated sustainability concepts, so when the community passed a construction bond in 2009, the staff lobbied for a building that could be incorporated directly into lesson plans. “Since the very start, the project’s focus has not been just the cool building, but having a program that instructs and teaches while it houses kids,” said Brent Emmons, the school’s principal.

Portland’s Opsi Architecture jumped at the chance to design the 5,600-square-foot addition to LEED® Platinum standards with net zero energy use. They employed numerous techniques to save and generate energy, including displacement ventilation and a 35-kilowatt solar array. They also included a hydronic

heating and cooling system with geothermal heat pumps and a radiant slab that “borrows” free cooling from a nearby stream during warm months.

Over the last 12 months of operation, the building exceeded its net zero target. It used 42,129-kilowatt hours and produced 42,606-kilowatt hours, for a positive energy production of 476-kilowatt hours.

The students are continuously interacting with the building through lesson plans and a classroom monitoring display. “The monitoring system is really crucial because every day the kids are able to look at what our building is using. If the energy use is high, they’re excited to figure out how we can use less,” said Becker. “They’re asking really brilliant questions about the system so they can understand how to use it better.”

Image courtesy of Michael Mathers

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