



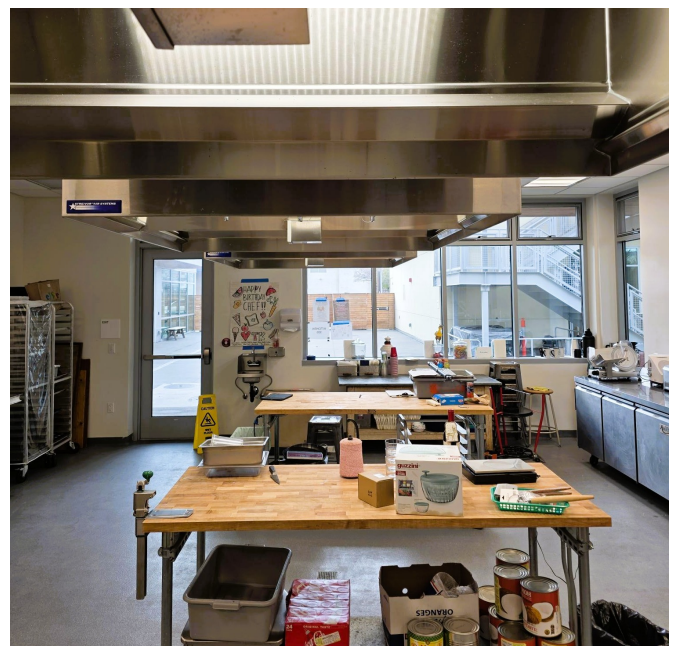
## Built for the Future Learning & Sustainability

### Blue Oak Culinary Arts Kitchen, Napa CA

The Blue Oak School is a co-educational, independent day school serving transitional kindergarten through eighth grade students in downtown Napa, California. The campus consists of two adjacent buildings, with the newest addition housing a state-of-the-art culinary arts classroom and a commercial kitchen. This two-story, 27,000-square-foot facility is fully electric and incorporates cutting-edge technologies to maximize efficiency and sustainability. High-performance heat pumps provide heating and cooling, while natural ventilation is seamlessly integrated into the design. Overall, the new facility achieves an energy use intensity that is 75% lower than the comparable baseline.

The culinary arts kitchen classroom offers an optimal, efficient environment for hands-on learning. Each student workstation is equipped with a 1,300-watt single-hob countertop induction cooktop, supporting the practical cooking component of the school's curriculum. These induction units enhance safety by automatically shutting off when cookware is removed and cooling down significantly faster than traditional cooktops, reducing the risk of burns.

In addition to culinary training, the technology provides a unique interdisciplinary opportunity—science teachers can use the induction system to demonstrate electromagnetism in a real-world application, bridging theory and practice in an engaging way.





The on-site commercial kitchen supports both on-site meals and off-site catering. The cookline is a prime example of a small, fast, and flexible kitchen capable of producing high volume with minimal equipment. A high-powered, four-hob countertop induction range delivers rapid cookware heat-up times—significantly faster than traditional resistive element ranges—producing no radiant heat from the unit. Alongside the induction range is a combination oven that brings optimal flexibility. This oven provides all the capabilities of several pieces of cooking equipment in one unit. It can bake, steam, cook-and-hold, braise and grill. Recipe and menu programmability and ease of cleaning minimize labor and maximize productivity all while reducing energy waste.

The electrical supply system used in the culinary arts kitchen classroom supports a high-performance, all-electric cooking environment. The 400-Amp-capacity circuit breaker panel ensures sufficient power for multiple pieces of professional-grade equipment operating simultaneously. With the 120/208 Volt, 3-phase, 4-wire configuration, a standard configuration for commercial kitchens, it provides efficient, balanced power distribution both for 208V 3-phase heavy-duty appliances and for smaller 120V devices. This setup ensures reliability, energy efficiency, and compatibility with advanced cooking technologies such as induction ranges and combination ovens, making it ideal for a modern culinary training space.

The Blue Oak School Culinary Arts Kitchen incorporates best-in-class equipment, particularly for the K-12 market segment, which is leading the transition to fully electric kitchens. To minimize operating costs, it is important to select highly efficient cooking equipment like induction cooktops and combination ovens. While the upfront capital expense of this equipment is higher than traditional cooking technologies like convection ovens and resistive element ranges, over time, the energy savings, productivity and labor savings will result in a lower lifetime ownership cost.

Equipment Specifications					
Type	Qty	Rated Input (kW)	Voltage (V)	Phase (Φ)	Amperage (A)
Single Hob Induction Range	6	1.8	120	1	15.0
4 Hob Induction Range	1	7.0	208	3	38.9
6 Full Pan Combination Oven	1	22.4	208	3	70.0