

2012 Exhibition of School Planning and Architecture

Centennial Junior High School

Kaysville, Utah
Middle/Junior High School
Project of Distinction
VCBO Architecture

Centennial Junior High School



Student Commons

Community Environment: The Centennial Junior High School project serves its surrounding community as a center for public events, as an inspiring place for learning, and as an attractive focal point that identifies the community as both progressive and committed to quality. Designed as a sustainable 70-year building, Centennial's design nods to the contextual architecture of its community, and demonstrates a hopeful optimism and positive attitude at the same time. Additionally, the site serves as a regional detention basin.



Student Commons

Community Environment, cont'd: Bryan Turner, AIA, Director of New Facilities for the district, states, "Centennial's design is the result of focused collaboration between the architect, the owner, and the community. The District is progressive and forward-thinking and the design reflects our vision for the community."



Classroom

Learning Environment: This school is the latest generation of the award-winning Davis Middle School Prototype. Originally designed to create a state-of-the-art learning environment that buffers middle school students at the “turning point” of their lives from the stress and fragmentation associated with the typical large junior high school experience, the new school has been revamped to achieve a number of additional goals, including the drastic reduction of energy use.

The key to the original design solution – the arrangement of the classrooms into three separate, grade-level specific, double-lobed academic learning centers, each surrounding (but connected through significant fenestration) a lively central collaboration space – has been maintained in the new school. These academic “houses” provide a highly flexible, open, and extremely visible environment for group collaboration, which fosters critical student/student and student/teacher relationships. Classrooms, conference rooms, faculty planning offices, student and faculty toilet rooms, and grade-specific lockers make up a “house”, promoting a cohesive environment in which students may live and learn.



Learning Spaces

Learning Environment cont'd:

Improvements to the plan include redesigned Food and Clothing labs, a more formal Performance Space, and the addition of LCD monitors, into which students can plug their netbooks, throughout all commons and collaborative areas to promote “on demand”, serendipitous learning opportunities. Teachers' desks have become mobile furniture, accommodating teacher flexibility for the next level of collaborative learning. Technologically, each classroom and the collaboration spaces all include sound reinforcement systems and computer projection. Newly hired staff was handpicked for their eagerness to become a part of a 21st century educational team.



Physical Environment

Physical Environment: Centennial Junior High School was designed as a student-centric collaborative community. Each “Education Community” is arranged around a central collaboration space which is designed not as a circulation space with added seating, rather as a meaningful programmatic element. Learning takes place both in and out of the classroom, often simultaneously. Students all have netbooks, making this one of the few schools in the country with one-to-one technology. The collaboration spaces are organized to be flexible so that the students can make them “their own”. The concept of Small Learning Centers is to create an intimate community within a large school – students will spend most of their school day within their community.


Learning opportunities here are integral to the architecture. At Centennial, named in honor of the School District’s 100th anniversary, the Learning Centers take the identity of the last ten decades, creating daily learning opportunities. Signage throughout provides a snapshot of inspiring scientific and historic discoveries and



Learning Environment

Physical Environment cont'd: technologies, including the first electric traffic light, invented by a policeman in Salt Lake City in 1912, through the invention of the automatic bread slicing machine, to Scotch tape, computers, the Polio vaccine, fiber optics, mobile phones, the World Wide Web, texting, and the ipod. At the Entries to each house, students see a timeline of inventions and discoveries, a timeline which also encircles the Dining/Commons.

The school is sited to allow all classrooms to face either north or south, allowing controllable daylighting into the learning spaces. The energy demand of the building has been drastically reduced through the use of automatic-dimming, super energy-efficient lighting and the extensive daylighting. Located on the roof are two photovoltaic panel arrays which provide some of the electricity that powers the school, and the lights in the parking lot are completely solar powered, costing the District nothing to run. Utilizing these energy advancements as a learning tool, the school has a "building dashboard" which allows students to see at any time, on an interactive monitor, how much energy the building is producing, and how much is being used by the lights, the heating or cooling. Building materials utilize sustainable and locally produced products, like concrete masonry units, metal panel, and floors are mainly ground concrete, great for maintenance and sustainable at the same time.



"It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow."

Often referred to as the Flying Saucer for its interdisciplinary nature, music and Physics, the 1920's were also a time of radical technological change. The commercial aviation industry took off after World War I and the entertainment industry flourished due to new innovations in radio and movies with sound. There were also many advancements in the medical field with new innovations and general focus on health.

- 1920 - Early television invents the Radi-Jet
- 1922 - Cathode Ray Tube (CRT) becomes available
- 1925 - First working mechanical television system developed
- 1925 - Clarence Birdseye invents a process for frozen food
- 1925 - Monignor Georges Lemaître the Big Bang theory
- 1926 - Robert Goddard flies the first liquid-fueled rocket
- 1927 - Herman Jethroe makes the first move with a sound
- 1927 - Charles Lindbergh flies across the Atlantic sea
- 1928 - First automatic breakfasting machine available

THE 1920'S



"Here men from the planet Earth first set foot upon the Moon. July 1969 AD. We came in peace for all mankind."

The 1960's have become synonymous with the great change, new ideas and even radical and subversive events and trends of the period. Society, the 1960's saw the passage of the Civil Rights Act, outlawing discrimination based on race or gender. It was also a great time for technological advancements, including the race to put a man on the moon.

- 1960 - The first working laser demonstrated
- 1962 - The first computer video game, Spacewar!, invented
- 1962 - Light Emitting Diode (LEDs) reintroduced
- 1962 - Fiber Optics used for communication
- 1963 - Computer mouse developed
- 1964 - BASIC programming language created
- 1967 - IBM develops first floppy disk
- 1969 - Aparat, prototype of the Internet, was introduced
- 1969 - Neil Armstrong becomes the first man on the moon

the 1960's



"Design is not just what it looks like and feels like. Design is how it works."

-Steve Jobs

The 1980's were a period incredible economic growth in America and technology rolls that were. Computers experienced explosive growth in the 80's, going from being a luxury for electronics hobbyists to a full-fledged industry. The IBM PC, launched in 1985, became the dominant computer for professional users while the Macintosh computer was the first commercially successful personal computer to use a graphical user interface that made it so.

- 1980 - Sony Walkman sold as the first portable music device
- 1981 - First flight of the NASA Space Shuttle Columbia
- 1981 - First Apple computer demonstration to the public
- 1981 - Osborne DM2-12 sold in America
- 1981 - Computer Disc II after release was released
- 1984 - NeXTstep Computer introduced
- 1985 - DOS, Operating System developed by Intel Software
- 1985 - Nintendo Entertainment System introduced to America
- 1989 - Prototype of the World Wide Web developed at CERN

THE 1980'S

Exterior

Planning Process This school is the result of a lively collaboration of stakeholders including teachers, students, District staff, community members, and architects. The District and architects began by assessing the previous award-winning facility, assigning a committee to define and update the original junior high program. Architectural post occupancy studies were analyzed, and those involved in the new school reassessed the effectiveness of the design to extend the vision of education for the 21st century.

The design team evaluated materials, electrical, and mechanical systems, exploring the newest technologies, and applied the best concepts to this new facility. Since building energy use and sustainability were an important part of the building vision, building energy modeling was utilized as an assessment tool, and extensive meetings with district maintenance staff were conducted to ensure the future maintainability of all building systems.



Exhibition of School Planning and Architecture

Project Data

Submitting Firm :	VCBO Architecture
Project Role	Design Architect
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Joint Partner Firm:	
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Construction Firm:	Hughes General Contractor
Project Role	General Contractor
Project Contact	Mr. Dan Pratt
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Address	900 North Redwood Road
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Project Details

Project Name	Centennial Junior High School
City	Kaysville
State	Utah
District Name	Davis School District
Supt/President	Dr. W. Bryan Bowles (Supt.)
Occupancy Date	August 2011
Grades Housed	7-9
Capacity(Students)	1,500
Site Size (acres)	23 Acres
Gross Area (sq. ft.)	172,000 SF
Per Occupant(pupil)	115.27
gross/net please indicate	
Design and Build?	No
If yes, Total Cost:	
Includes:	
If no,	
Site Development:	3,868,000
Building Construction:	22,032,000
Fixed Equipment:	Included in building cost
Other:	
Total:	25,900,000



THE 1920'S





THE 1920'S



1935

Kodachrome, the first commercially successful color film, manufactured by Eastman Kodak

1936

Phillips-head screw, a crosshead screwtop design, patented by Henry Phillips

Fig. 1



1967

Google started as a research project at Stanford University by Larry Page and Sergey Brin

The first cloned mammal, Dolly the sheep, is born

THE 1990'S



THE 1980'S



the 2000's

the 1750's



