The Bechtel Environmental Classroom at the Ada & Archibald MacLeish Field Station:

What can a building teach you?
BIO 154
Biodiversity, Ecology, & Conservation
Coring our “vernal” pool.
BIO 154
Biodiversity, Ecology, & Conservation
Spring sampling of one of our vernal pools

Students experiment with native and invasive flora.
Summer research students construct trails to access the 240-acre property for research and recreation. The trail system was designed by Smith students in LSS 250: Landscape & Narrative, a landscape design studio, in 2008.
ARS 283, Introduction to Architecture: Site and Space worked with BIO 363, Animal Behavior: Methods to design and construct bird houses for tree swallows, chicadees, bluebirds, screech owls, and kestrel.
Bechtel Environmental Classroom
New building location
LIVING BUILDING CHALLENGE 2.0
A VISIONARY PATH TO A RESTORATIVE FUTURE
www.livingbuildingchallenge.org

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THE METAPHOR OF THE FLOWER

ROOTED IN PLACE AND YET:
Harvests all energy + water
Is adapted to climate and site
Operates pollution free
Is comprised of integrated systems
Is beautiful
(related to the new building)

Class and Student Projects ^ To Date

- Existing Conditions Site Inventory
- Invasive Species Mitigation
- Meadow/Pasture Restoration
- Sustainable “Net Zero” Water Research
- Day-lighting Model
- Solar-powered Electric Fence
- Living Building Challenge Interpretive Signage
- Permaculture Design for Productive Landscape
Jessica Pollack, ‘11, works on a day-lighting model for the Bechtel Environmental Classroom (BEC)
Jessica’s model was integral to determining the proper quantity and placement of windows in the BEC to reduce the need for electric lighting.
Xizhu Zhao, ’12, designed a solar-powered fence charger (to replace the one seen here) to ensure that construction vehicles and cows remain separate throughout construction. Xizhu’s design will allow us to charge 10+ miles of fence with a 20W solar panel backed up by a 12-volt deep-cycle battery.
Construction Update
Students in ARS 386: Topics in Architecture visit the site under construction to gather information for their work on interpretive signs for the building.
Future Class and Student Projects

- Solar charging station for new all-electric 4x4 UTV
- Monitoring of the building’s energy efficiency
- Interior Bookcase design and construction
- Monitoring of the well’s water quality
- Monitoring of the building’s function
- Educational Program Development
- Safe-to-fail design experiments
- Productive landscape design
- Outdoor seating design
- Sculptural Installation

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