

Ultimate green

By JOANNA DODDER, The Daily Courier

[Printable Version](#)

[E-mail this story](#)

Top Features Sections Stories:

- [Sprint triathlon returns to Chino Valley](#)
- [Public invited on trip to view bighorn sheep](#)
- [Upper Verde under OHV attack](#)
- [Walker Day Saturday features fun in the pines](#)
- [Fishing ... for FREE; two free days this year](#)
- [National Trails Day events Saturday](#)
- [Two free fishing days coming up](#)

[» View All Features Sections](#)

Friday, January 12, 2007

Highlands Center completes natural history building

PRESCOTT Highlands Center for Natural History employees were so happy to finally move into their new James Learning Center building this week that they found themselves literally howling with joy.

It's a huge change from the tiny trailer they were stuck in for awhile, until it got so cold their computers wouldn't even work.

The James Learning Center is the final major addition to the Highland Center's new 80-acre Lynx Creek Site nestled in the Prescott National Forest just west of Lynx Lake. It also features an amphitheater, outdoor restrooms and nature trails that have been on site for more than a year.

advertisement [jump to rest of article ↓](#)



20,000 Shoppers Every Day

Submit your classified ad online

 dCourier.com

With the new building comes many new opportunities for people to learn about the Central Highlands that surround them.

"This whole spring is really booked with brand new things," Highlands Center for Natural History Executive Director Nichole Trushell said.

She calls it an "opening season" versus an "opening day."

The new Nature Nuts and Knee High Naturalists kids clubs will start Jan. 20 and continue on the third Saturdays of the month. They'll use hands-on science to teach children about the wonders of nature.

For the adults, the Highlands Center will begin its new "Beyond the Basics" series of adult education classes in March.

The public events inside the building kick off with the 13th year of Natural History Series classes that start Feb. 8.



People can register for these clubs and classes now by calling 776-9550.

Some of the learning will center around the building itself, since it meets stringent "green" standards. A green curriculum will incorporate that real-life example.

The Highlands Center staff will be surprised if the building doesn't end up meeting some level of Leadership in Energy and Environmental Design standard.

The U.S. Green Building Council's LEED Green Building Rating System is the nationally accepted benchmark for environmentally friendly design, construction and operation.

The James Learning Center includes passive solar design and more than 50 solar panels; log supports and rock walls created from materials in the surrounding Prescott National Forest and New Mexico; in-floor heating with concrete floors colored by soy-based stain; trellises to hold up vines that will provide natural shade; and a butterfly-style roof that directs rain and snowmelt toward native outdoor plants.

Relaxing colors, a variety of texture and plenty of windows will make areas such as the 100-seat classroom and nature store pleasing places to hang out. The building will also feature a reference library for members, noted Outreach Coordinator Cindy Scott.

Nearly all the companies involved in the construction of the \$1.4 million building were local, Trushell said.

"There's just a lot of great heart in this building," she said. "People cared."

Artistic touches give the outdoor area a unique look beyond the unusual building. For example, local artist Royce Carlson incorporated recycled steel in the railing. His metal "rain funnel" on the east side funnels rain onto a rock wall to create a waterfall, and then a drain takes that water on down to more outdoor plants.

Trushell's husband Steve Morgan, a landscape architect, created a hole in the deck with a basin underneath it so an aspen can grace the west side of the Learning Center.

Prescott students even got in on the act. They painted colorful native animals on tiles featured on the walls of the outdoor bathroom facility.

Some finishing touches are yet to come.

Artist Heather Johnson has created a large bronze sculpture entitled "Equipoise" that will stand prominently next to the Learning Center. The Highlands Center will unveil it March 23 during a special donor preview event.

An arboretum will feature the native plants that the Highlands Center will sell during an April 28 event that will offer twice as many plants as the highly successful first sale last year. The plants in the arboretum will be grouped into areas such as a butterfly garden and Firewise garden.

"It all ties together so nicely," Trushell said.

She paused a moment to think about how long she and her staff have been working on this project. She first approached the Prescott National Forest about the cooperative venture 12 years ago.

"It's an exercise in perseverance," she said.

Contact the reporter at jdodder@prescottaz.com

Reader Comments

Posted: Friday, January 12, 2007

Article comment by: **Sharon Petz**

Thank you for the wonderfully informative article on the Highlands Center for Natural History. May I

piggyback on Nichole Trushell's comment that "there is a lot of great heart in this building." There is indeed so much love and caring infused into every aspect of making this dream a reality. It is this same infusion of caring that directs their programs as well. I really encourage the public to come and see for themselves what a great gift the Highlands Center for Natural History is to the surrounding communities. Sharon Petz Member, Highlands Center for Natural History Board of Directors

Article Comment Submission Form

Please feel free to submit your comments.

Article comments are not posted immediately. Each submission must adhere to the Use of Service section in our [Terms of Use agreement](#). There may be a delay for comments to appear. Your comments may also appear in our print edition.

The email address you provide on this form is for internal use only and will not be visible to the public.

Message:

E-mail:

**Name
(optional):**

**Telephone
(optional):**

Passcode:

This form will not send your comment unless you copy exactly the passcode seen below into the text field. This is an anti-spam device to help reduce the automated email spam coming through this form.



Please copy the passcode exactly
- it is case sensitive.

Submit

Clear Form

advertisement



Sections

- Blogs
- Classifieds
- [_Place An Ad Online](#)
- Contact Us
- Local News
- Milestones
- Obituaries
- Opinions

Features Sections

- Features Sections
- Ask AP
- Business
- dCourier's local health care series
- Generations
- Getting Out
- Inside & Out
- Modern Times

Other Publications

- AZ StateWide Classifieds
- Big Bug / Canyon Country
- Book of Lists
- Camp Verde Bugle
- Chino Valley
- Community Directory Phone Book
- Prescott
- Prescott Valley

Special Sections

- Coupon Zipper
- ShopLocal.com
- Local Events
- Local TV Listings
- Police & Emergency Scanner
- PNI Advertising Rates
- Smart Shopper
- Sun Shopper

Photo Galleries

Site Map

Submit news tips/story ideas

Sports

Videos

Video Support Request

Write the Editor

Worship Directory

Movies

Music and Video Games

Prescott Capital Needs

Prime Time

Real Estate

Religion

Tri-City Business News

Articles

Tri-City Life

Vitality

Entertainment

The Cost of Immigration

Verde Independent

Our Other Publications

Subscribe

Temporary Stop Subscription

Renew your print subscription online

Add a dCourier.com Google Gadget

Tri-City Business News

Sun Day Shopper

Today's Real Estate

Video Home Tours

Western News&Info Rate Card

Five Day Forecast

Weather Trends

Prescott, AZ
 Last Update: 3:53 PM MST
 Clear
 95°F
 Variable 5 MPH
 CURRENT CONDITIONS



Copyright 2008 Prescott Newspapers, Inc. The Daily Courier is the information source for Prescott in Northern Arizona. Original content may not be reprinted or distributed without the written permission of Prescott Newspapers, Inc. Prescott Newspapers Online is a service of Prescott Newspapers Inc. By using this site, you agree to abide and be bound by the Site's [terms of use](#) and [Privacy Policy](#), which prohibit commercial use of information on the Site. [Click here](#) to email your questions, comments or suggestions. Prescott is a proud publication of Western News&Info, Inc. All Rights Reserved.

Software © 1998-2008 1up! Software, All Rights Reserved

Ahead of the curve: Local architects inspire green building

By Doug Cook, The Daily Courier



+ click to enlarge

Courtesy/Catalyst Architecture
The Highlands Center's 4,250-square-foot James Environmental Learning Center, the organization's educational and administrative home that opened in January 2007, is the first Leadership in Energy and Environmental Design Gold-certified building in Yavapai County.

Thursday, March 06, 2008

PRESCOTT - Since the early 1970s, Prescott-based architects Matt Ackerman and Jeffrey Zucker have prided themselves on designing environmentally friendly buildings - long before the practice gained nationwide popularity during this decade.

The duo, which operates Catalyst Architecture, LLC inside an historic building at 123 E. Goodwin St., served as the design team for the unique 1-year-old Highlands Center for Natural History - nestled in a pocket of ponderosa pines within the Prescott National Forest off Walker Road.

In early February, the center received a Gold certification from the Washington, D.C.-based U.S. Green Building Council's Leadership in Energy and Environmental Design, or LEED, program.

advertisement [jump to rest of article ↓](#)

20,000 Shoppers Every Day
Submit your classified ad online
dC
dCourier.com

Ackerman and Zucker, the lone architectural firm principals in Yavapai County who are LEED accredited, designed the Highlands Center to follow this program, which has become the national standard for what makes a building "green."

Ackerman said many people do not know that half of all greenhouse gas emissions come from buildings consuming energy.

"LEED is a holistic approach that deals with human health and a healthier environment,"





Courtesy/Catalyst Architecture
The James Learning Center's curved butterfly-shaped roof contributes to its environmentally sensitive design. The building design uses natural daylight and ventilation for a passive supply of almost 70 percent of the building's heating and cooling needs.

[Printable Version](#)
[E-mail this story](#)

Top Features Sections Stories:

- [Spring cleaning? Dust off your financial plan](#)
- [Market is beginning to recover, but sellers need to get realistic](#)
- [The ups and downs of stairs](#)
- [How to get buyers to bite in a difficult market](#)
- [Park model housing an economical alternative](#)
- [Grant gives homeless shelter a chance to grow](#)
- [Roof trusses 101](#)

» [View All Features](#)

Ackerman said. "We would like to see everyone build more environmentally conscious. You don't need LEED to have an energy efficient building, but building with common sense is important."

The Gold ranking is LEED's second highest level of accreditation, directly behind Platinum - a classification reserved for the premium in environmentally sensitive buildings - and ahead of its Basic and Silver levels.

The Highlands Center's 4,250-square-foot James Environmental Learning Center is the first LEED-Gold certified building in the county and one of just 11 statewide.

Of that number, only three structures in the state have a better LEED rating than the Highlands Center. The BioDesign Research Center at [Arizona State University](#) in Tempe and two buildings at [Northern Arizona University](#) in Flagstaff have achieved Platinum status.

When rating a building, LEED follows a points system that measures a commercial, residential or educational building's structural performance based on sustainable sites, water efficiency, energy and atmosphere, materials and resources used, indoor environmental quality and innovation in design.

The goal of the program is to help architects and builders improve a building's performance by:

- Lowering operating costs.
- Reducing waste sent to landfills.
- Conserving energy and water.
- Increasing occupants' health and safety.
- Reducing greenhouse gas emissions.

During the process for the Highlands Center achieving Gold status, Prescott architect Patti Olson collected and filed LEED's requisite documentation from all consultants who helped with the project.

Ackerman then scanned those documents into a computer and submitted them to LEED over the Internet to prove his team abided by the council's guidelines.

"While the LEED documentation process itself can be time-consuming, many of the concepts that the LEED Green Building System addresses just make good sense," Zucker said.

One of the most unique characteristics of the Highlands Center is that it is not connected to the electrical grid.

Natural daylight and ventilation, along with a well designed and properly oriented building envelope - the separation between a building's interior and exterior environments - allow for a passive supply of almost 70 percent of the building's heating and cooling needs.

To earn its Gold rating, the project employed, among

other specifications, a 7-kilowatt photovoltaic array on its south facing roof slope.

The photovoltaic array can generate an electrical current or voltage when exposed to visible light or other electromagnetic radiation.

In addition, the James Learning Center's clerestory windows on the upper portion of its walls provide the building's natural daylight and ventilation.

The building's stained concrete floors; south-facing interior stone wall which stores thermal heat; high-performance glazing and insulation systems; water-saving plumbing fixtures; energy-efficient mechanical equipment, appliances and lighting features; and non-toxic paints, sealants and adhesives also contributed to the rating.

On its exterior, the building's operators gained LEED credits for growing water-efficient plants, reusing rainwater for irrigation and employing a storm water management plan.

Ackerman said 25 states, more than 100 cities and counties, and more than a dozen federal agencies have committed to some level of LEED certification for their new buildings.

He added that LEED builders typically see an 8 to 10 percent increase in construction costs, but the savings in energy expenses over time helps compensate for this.

"We try to expand people's ideas of operating and maintenance costs, and their savings down the line," Ackerman said. "We try to educate the quick-turnaround developers that they can recoup their investment. People who own their building for a few years will see the benefits."

Phoenix and Tucson have approved resolutions requiring LEED certification for all new municipal structures. The City of Scottsdale has taken this a step further, requiring all of its new municipal buildings to achieve a minimum level of LEED-Gold certification.

In 2006, Gov. [Janet Napolitano](#) issued an executive order stating that all new state buildings must achieve a minimum level of LEED-Silver.

Presently, hospitals, universities, government agencies, school districts and corporations have shown the most interest in LEED. For example, Yavapai College's Agribusiness and Science Technology Center on Old Home Manor Drive in Chino Valley gained recognition as the first LEED building in the tri-city area back in 2004. It has a Silver rating.

"So much building is developer driven: 'How fast can we do it?'"

Ackerman said. "This kind of building requires thought and care."

The LEED program gained credibility, Ackerman said, because of its rigorous third-party independent review process. The U.S. Green Building Council has chapters across the country.

Ackerman said he and others employed with the [City of Prescott](#) are planning to start a chapter in the tri-city area soon.

Reader Comments

Posted: Saturday, March 08, 2008

Article comment by: **Matthew B Ackerman, LEED AIA**

Doug-- great article, thanks so much for covering this. One note of correction however, Construction costs for LEED buildings are comparable to non-LEED certified buildings (as in not significantly higher). It is the A&E costs (architectural & engineering) that can be 8-10% higher. This is a fairly important distinction to note. The added A & E costs are from the documentation as well as energy modeling and commissioning that LEED requires. On a 1,000,000 construction project, 8-10% more for construction would be \$100,000, whereas 8-10% more for A & E might only be in the \$6,000 range-- an amount easily recouped in saved energy system installation, maintenance and operational costs. When considered as part of the "total cost" picture, the ROI (Return On

Investment) for LEED-certified, or otherwise green buildings is positive. Our company has prepared an informational presentation on LEED that provides comparative construction cost data on LEED buildings prepared by the Davis Langdon Group of San Francisco, California. The Langdon Group has provided unbiased, comprehensive construction cost data to the building industry for over 30 years. To download our presentation with this comparative construction cost data, go to; Thanks again, Doug

Article Comment Submission Form

Please feel free to submit your comments.

Article comments are not posted immediately. Each submission must adhere to the Use of Service section in our [Terms of Use agreement](#). There may be a delay for comments to appear. Your comments may also appear in our print edition.

The email address you provide on this form is for internal use only and will not be visible to the public.

Message:

E-mail:

Name (optional):

Telephone (optional):

Passcode:

This form will not send your comment unless you copy exactly the passcode seen below into the text field. This is an anti-spam device to help reduce the automated email spam coming through this form.



Please copy the passcode exactly
- it is case sensitive.

Submit

Clear Form

advertisement

Celebrate **MILESTONES** Online ▶▶
Submit **YOUR** Milestones Online

Sections

Blogs
Classifieds
_Place An Ad Online
Contact Us
Local News
Milestones
Obituaries
Opinions

Features Sections

Features Sections
Ask AP
Business
dCourier's local health care series
Generations
Getting Out
Inside & Out
Modern Times

Other Publications

AZ StateWide Classifieds
Big Bug / Canyon Country
Book of Lists
Camp Verde Bugle
Chino Valley
Community Directory Phone Book
Prescott
Prescott Valley

Special Sections

Coupon Zipper
ShopLocal.com
Local Events
Local TV Listings
Police & Emergency Scanner
PNI Advertising Rates
Smart Shopper
Sun Shopper

Photo Galleries

Site Map

Submit news tips/story ideas

Sports

Videos

Video Support Request

Write the Editor

Worship Directory

Movies

Music and Video Games

Prescott Capital Needs

Prime Time

Real Estate

Religion

Tri-City Business News

Articles

Tri-City Life

Vitality

Entertainment

The Cost of Immigration

Verde Independent

Our Other Publications

Subscribe

Temporary Stop Subscription

Renew your print subscription online

Add a dCourier.com Google Gadget

Tri-City Business News

Sun Day Shopper

Today's Real Estate

Video Home Tours

Western News&Info Rate Card

Five Day Forecast

Weather Trends

Prescott, AZ
 Last Update: 3:53 PM MST
 Clear
 95°F
 Variable 5 MPH
 CURRENT CONDITIONS



Copyright 2008 Prescott Newspapers, Inc. The Daily Courier is the information source for Prescott in Northern Arizona. Original content may not be reprinted or distributed without the written permission of Prescott Newspapers, Inc. Prescott Newspapers Online is a service of Prescott Newspapers Inc. By using this site, you agree to abide and be bound by the Site's [terms of use](#) and [Privacy Policy](#), which prohibit commercial use of information on the Site. [Click here](#) to email your questions, comments or suggestions. Prescott is a proud publication of Western News&Info, Inc. All Rights Reserved.

Software © 1998-2008 1up! Software, All Rights Reserved

LEARNING FROM NATURE

By JOANNA DODDER, The Daily Courier

[Printable Version](#)

[E-mail this story](#)

Top Local News Stories:

- [UAF supports Take Your Dog to Work Day](#)
 - [Fun Friday 'Boot Camp' Day](#)
 - [Group is sending troops in Iraq big toys](#)
 - [Lockwood challenges Springer's nominating petitions](#)
 - [Accident claims the life of Chino Valley man](#)
 - [Residents raise questions over city's release of information](#)
 - [Supervisors learn options to balance county budget](#)
- [» View All Local News](#)

Friday, March 30, 2007

New Highlands Center building aims to educate; practices what it preaches

PRESCOTT The butterfly-shaped roof is one of the most stunning features of the Prescott area's first building designed to meet nationally accepted environmental standards.

But it's not the only feature designed to remind people of nature when they see the Highlands Center for Natural History's new James Learning Center, which sits on the Prescott National Forest next to Lynx Lake.

The huge wooden columns reach up like trees to hold the butterfly roof that also can look like cupped hands, Prescott architect Matthew Ackerman said.



"Here is a design saying, 'Water is a precious commodity,'" Ackerman observed. "That is the essential gesture that the roof is making."

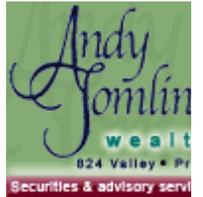
The roof funnels precipitation into a metal rain funnel that local artist Royce Carlson created, which then sends the water onto a rock wall to create a waterfall. A drain then takes the water down to native plants.

Especially since it sits in the midst of the Prescott National Forest, Ackerman designed the building to respond to the seasons.

The leaves of deciduous vines, for example, will hang on trellises above windows to provide shade during the warmer seasons. The building then sheds the leaves during the winter.

The building's design, construction and operation aim to meet the U.S. Green Building Council's standards called LEED, which stands for Leadership in Energy and Environmental Design.

Ackerman, his partner Jeffrey Zucker of Catalyst Architecture, along with the building's general contractor



Haley Construction of Prescott, all are LEED certified. This is their first LEED project. The only currently certified LEED building in this region is Yavapai College's Agribusiness and Science Technology Center in Chino Valley.

Ackerman assembled a team of LEED consultants that included an energy expert and a mechanical engineer.

They studied the intricacies of nature on the building site so the structure would face the best direction in relation to sunlight, wind and drainage, for example. LEED designs heavily discourage massive grading.

"The idea is to work with the natural terrain," Ackerman said.

LEED requirements include sustainability, water efficiency, design innovation, indoor environmental quality and energy efficiency.

This building is off the electricity grid and it heats and cools itself 65 percent of the time, Ackerman said.

The project gets LEED credits during construction by recycling leftover building materials and using local supplies, such as schist from a quarry just across Walker Road. Leftover wood became landscaping chips.

LEED requires detailed documentation of construction credits, general contractor Tom Haley said. The center will submit its application for a gold LEED certification next month.

"It is a lot of work and it's a lot of tracking and it's a lot of paperwork," Haley said. But he's glad he did it.

The Highlands Center staff and supporters really wanted an environmentally friendly demonstration building to go with the center's mission to teach people about their environment, said Tom Benson, whose family donated money for the center's Benson Family Nature Store.

"This building really is the culmination of all that," Benson said. "It was very gratifying to see this building go up.

"It's an excellent demonstration of what can be done in construction today in an affordable manner that's still environmentally friendly."

Benson is a long-time supporter of the Highlands Center, acting as its first president when it took on its new name in 1994.

"The decisions that young people are going to have to make about the environment as they grow older are going to be complex, so they need a basic understanding of how nature works," Benson said.

Contact the reporter at jdodder@prescottaz.com

Reader Comments

Posted: Friday, March 30, 2007

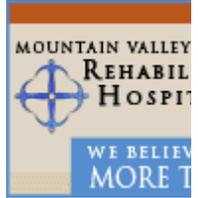
Article comment by: **Steven Ayres**

The wrong major street name, not once but three times, including the headline, front page above the fold. Amazing. You really do need at least one pro proofreader and editor. Call me, maybe we can make a deal. Steven Ayres COMwest Communications

Article Comment Submission Form

Please feel free to submit your comments.

Article comments are not posted immediately. Each submission must adhere to the Use of Service section in



Submit NEWS



our [Terms of Use agreement](#). There may be a delay for comments to appear. Your comments may also appear in our print edition.

The email address you provide on this form is for internal use only and will not be visible to the public.

Message:

E-mail:

**Name
(optional):**

**Telephone
(optional):**

Passcode:

This form will not send your comment unless you copy exactly the passcode seen below into the text field. This is an anti-spam device to help reduce the automated email spam coming through this form.



Please copy the passcode exactly
- it is case sensitive.

Submit

Clear Form

advertisement

Celebrate **MILESTONES** Online ▶▶
Submit **YOUR** Milestones Online

Sections

- Blogs
- Classifieds
- [_Place An Ad Online](#)
- Contact Us
- Local News
- Milestones
- Obituaries
- Opinions
- Photo Galleries
- Site Map
- Submit news tips/story ideas
- Sports
- Videos
- Video Support Request
- Write the Editor
- Worship Directory

Features Sections

- Features Sections
- Ask AP
- Business
- dCourier's local health care series
- Generations
- Getting Out
- Inside & Out
- Modern Times
- Movies
- Music and Video Games
- Prescott Capital Needs
- Prime Time
- Real Estate
- Religion
- Tri-City Business News
- Articles

Other Publications

- AZ StateWide Classifieds
- Big Bug / Canyon Country
- Book of Lists
- Camp Verde Bugle
- Chino Valley
- Community Directory Phone Book
- Prescott
- Prescott Valley
- Verde Independent
- Our Other Publications
- Subscribe
- Temporary Stop Subscription
- Renew your print subscription online
- Add a dCourier.com Google Gadget

Special Sections

- Coupon Zipper
- ShopLocal.com
- Local Events
- Local TV Listings
- Police & Emergency Scanner
- PNI Advertising Rates
- Smart Shopper
- Sun Shopper
- Tri-City Business News
- Sun Day Shopper
- Today's Real Estate
- Video Home Tours
- Western News&Info Rate Card
- Five Day Forecast
- Weather Trends



Tri-City Life
Vitality
Entertainment
The Cost of Immigration



Prescott, AZ
Last Update
3:53 PM MST
Clear
95°F
Variable 5 MPH
CURRENT CONDITIONS



Copyright 2008 Prescott Newspapers, Inc. The Daily Courier is the information source for I in Northern Arizona. Original content may not be reprinted or distributed without the writt Newspapers, Inc. Prescott Newspapers Online is a service of Prescott Newspapers Inc. By to abide and be bound by the Site's [terms of use](#) and [Privacy Policy](#), which prohibit comme information on the Site. [Click here](#) to email your questions, comments or suggestions. Pres is a proud publication of Western News&Info, Inc. All Rights Reserved.

Software © 1998-2008 1up! Software, All Rights Reserved