Help The Perkins School become the first school in the world to have a “Living Modular Classroom.”

“Plant the SEED!”
Dear Parents and Friends of The Perkins School,

During the last week of school in May, our administrator Shana Reiss de Reyes was able to rouse me from my office and get me to go see a cutting edge “living building” on display in south Lake Union. Angie and I met Shana down there and toured the “SEED Classroom” with Stacy Smedley, one of the designers and founders. Angie, Shana, and I were all immediately awestruck by the amount of innovation in every element of the building as well as what a perfect fit it would be for our school. Over the course of the summer and early fall, teachers, board members, and administers visited the SEED Classroom, explored other building possibilities, and investigated online. After much research and discussion, the opinion was unanimous. The SEED Classroom, with its emphasis on sustainability and educational design would be an amazing addition to Perkins.

The Seed Classroom is a tremendous fit for our school. This classroom would be our largest at 28 feet by 32 feet. With its ample natural daylight, high ceiling, green wall, abundant corkboards and display walls, and LEED certified non-toxic materials, this is simply a great learning space. There are also numerous integrated educational elements like rainwater cisterns with gauges, gray water filtration system, living plant wall, solar panel digital monitor, and more. Our students will be able to be part of ongoing performance monitoring of the classroom as part of the “Living Building Challenge.” They will track the building’s energy and water use and will add to a national database. After a year of monitoring, our science classroom will be one of the first ten certified living buildings in the world! Also, the designers of the SEED classroom left many elements of the building’s construction exposed so that informal learning can occur. Electrical lines can be followed from entrance to outlet, blue and red water pipes allow children to see the path of hot and cold water, and unpainted walls and beams allow students to better understand the composition of construction materials. As you can understand, the learning opportunities are boundless.

The addition of this building will also underscore the importance of science to the Perkins experience. There are very few elementary schools that emphasize science to our degree. National educational leaders such as the National Research Council and The Partnership for 21st Century Skills stress that exemplary science education is imperative. Skills such as critical and systems thinking, non-routine problem solving, and reinvention are essential for a well-prepared, modern student.

We are a nimble school! We feel very fortunate that we are able to quickly take advantage of this amazing opportunity. If we have a stellar fundraiser, not only will we be the first school in the world to have this cutting edge building, but we will also be able to have the classroom here on campus in late spring! Our goal for our Capital Campaign is $110,000. Last year our annual campaign (replaced this year by this Capital Campaign) raised $55,000. It is going to take extra effort on all of our parts to make this happen. Please talk to employers about matching funds, grandparents and relatives about donating, and give as generously as you can. Let’s seize this remarkable opportunity!

Sincerely,

Barry Wright
Head of School
The Perkins School
Imagine a POD classroom...

First of its Kind in the World, With Cutting Edge Design – As a “living building,” the SEED classroom allows numerous opportunities to facilitate the teaching of STEM (science, technology, engineering, and mathematics) and project based learning. Numerous built-in features stimulate discussion as well as allow students to formally and informally collect and analyze data.

Net Zero – The classroom is designed to be fully self-sustainable. It is extraordinarily energy efficient and produces all of the electricity it needs using adjacent solar panels. Rainwater is collected for classroom use and to water an indoor food producing “green wall.” A state of the art composting toilet allows the building to be fully “net-zero.”

Solar Photovoltaic Array – Solar panels the will be installed above the school’s gym, giving students a closer view from upstairs’ classrooms. Electricity generated by these panels will be monitored by students using instruments inside the SEED classroom.

Most Efficient Mechanical Systems Available – The classroom has an energy recovery ventilator (ERV) for optimum ventilation and high indoor air quality and, of course, heightened energy efficiency. State of the art heating panels and led lighting complete the smart interior atmosphere controls.

Rainwater Collection and Filtering – Rainwater is collected in two cisterns with gauges, digital monitors and treatment systems. Students can track rainwater collection and usage, analyze data and conduct experiments.

Solid “Warm” Walls and Ceiling – R-49 ceiling and R-40 wall insulation (12” thick) is 30% above code, making the classroom highly insulated. All walls and ceilings are solid and have safely exposed wiring and pipes to help students understand the routes, origins, and endpoints of electricity and water. Exposed components and solid walls also allow for easy future alterations.

Living Wall – Fed by treated grey water, the system helps students understand how water is collected, treated, and reused. The living wall will allow students to grow year-round vegetables.

Non Toxic and Full of Light – Absolutely no toxic materials were used in any part of the building’s construction. All materials are LEED certified. Triple pained windows, transoms, and tubular skylights provide ample natural light.
The Future is at Perkins

The SEED Classroom truly is a living laboratory. Energy meters can be incorporated into math or science classes and used to analyze exactly how much electricity is needed to heat the building and run computers and lights. Water catchment can be used to examine the composition of rain water, compare to potable water, and consider what constitutes grey water. Using the SEED Patch, an online platform, older students will monitor the performance of the building and submit their findings to a national data base. Students will record, compare and contrast data, and will help prove that our building is truly “living.”

"Now—not in some nebulous future of 2030 or 2050 but today, which is a very hopeful act to give to our children. And hopefully they’ll take this message home to their parents as a set of questions: ‘Why don’t we? Why haven’t we? Why can’t we...do these things?’"

Jason McClennon, founder of the Living Building Challenge talking about the SEED Classroom on NPR, May 20, 2013
The founders of SEED worked with educators and students to create an effective, inviting and multifaceted learning space.

Students hand pump water from two large cisterns for many classroom uses and a filtered gray water system is used to support a wall full of plant starts.

All wiring, piping and construction material is exposed so children can better understand a building’s inner secrets.

Corkboard, ample space, abundant natural lighting, displays, and data collection instruments make SEED an ideal learning environment.

Everything about this classroom is smart and thought-provoking. Yes, even the state of the art (and non-stinky) composting toilet!

Solar panels installed on the school’s flat roof will provide all of the energy that the SEED classroom will ever need.
Additional Facts

**Fundraising:** This SEED Classroom capital campaign replaces fall’s annual fund drive. Last year we received about $55,000 in annual fund donations.

**Finance:** We have budgeted $260,000 for the SEED classroom project. Our goal is to raise $110,000 from donations. The Perkins School is a recognized 501(c)(3) non-profit. Its tax identification number is 51-0460994. Donations may be made by check, credit card or using PayPal’s link on The Perkins School’s website: http://theperkinsschool.org/giving/

**Media:** There will be ongoing media attention for Perkins because we will be the first to have a “Living” modular building. After one year of monitoring, Perkins SEED classroom should be one of the first ten certified “living buildings” in the world. The school has agreed to allow other schools, organizations, and the media to tour the building when the school is not in session.

**Occupancy:** It is our goal to start science classes in the building during the current 2013-2014 school year, possibly in May!

**Square Footage:** The SEED classroom is about 860 square feet, 28 feet by 32 feet, similar in size to our gym.

**Enrollment Projections:** We have 79 students enrolled in the 2013-2014 school year, about 11% beyond our initial projections. We anticipate being at full capacity of around 85 students in the 2014-2015 school year.

**Facilities:** We have a very long-term lease on our main building with several extension options that would allow us to stay at our current location for 40 years, along with “first right of refusal.”

**Parking Lot:** We currently have 9 parking spaces plus one designated for disabled. After we install the SEED classroom, will be slightly reconfiguring the parking layout and hope to lose only one parking space.

**“Stage” Deck:** We plan to build a large deck along the front of the building which will be facing the playground. This deck will also act as an outdoor stage. The chicken coop and boot barn will be moved to another location in the backyard area.

**Science:** Our intent is for the SEED building to house, support, enhance and house our science program. The SEED classroom will allow us to expand all faucets of our science program including biology, chemistry, physics and earth/environmental.
THE 20 IMPERATIVES OF THE LIVING BUILDING CHALLENGE™

Living Building Challenge is a philosophy, advocacy tool, and certification program that addresses development at all scales.

SITE
Restoring a healthy coexistence with nature

01 Limits to Growth
Eligiblestein include grasslands or brownfields that are not on or adjacent to sensitive ecological habitats, prime farmland, or within the 100-year flood plain. Landscape may only be native and/or naturalized species planted to support succession.

02 Urban Agriculture
All projects will integrate opportunities for agriculture appropriate to the scale and density of the project using its Floor Area Ratio as the basis for calculation.

03 Habitat Exchange
For each hectare of development, an equal amount of land must be set aside for thriving ecosystems.

04 Car Free Living
Each new project should contribute towards the creation of walkable, pedestrian-created communities.

WATER
Creating water independent sites, buildings and communities

05 Net Zero Water
One hundred percent of occupants’ water use must come from captured precipitation or closed loop water systems that are appropriately purified without the use of chemicals.

06 Ecological Water Flow
One hundred percent of storm water and building water discharge must be managed on-site and integrated into a comprehensive system to feed the project’s demands.

ENERGY
Relying only on current solar income

07 Net Zero Energy
One hundred percent of the project’s energy demand must be supplied by on-site renewable energy on a net annual basis.

HEALTH
Maximizing physical and psychological health and well being

08 Civilized Environment
Every occupable space must have operable windows that provide access to fresh air, views, and daylight.

09 Healthy Air
The project must take precautionary measures to maintain a nourishing indoor environment.

10 Biophilic
The project must be designed to include elements that nurture the innate human attraction to natural systems and processes.

MATERIALS
Endorsing products and processes that are safe for all species through time

11 Red List
The project cannot contain any of the listed work-in-class materials or chemicals that are ubiquitous in the building industry.

12 Embodied Carbon Footprint
The project must account for the total footprint of embodied carbon from its construction and projected replacement parts through a one-time carbon offset.

13 Responsible Industry
The project must advocate for the creation and adoption of third-party certified standards for sustainable resource extraction and fair labor practices.

14 Appropriate Sourcing
The project must incorporate place-based solutions and contribute to the expansion of a regional economy rooted in sustainable practices, products and services.

15 Conservation + Reuse
All projects must strive to reduce or eliminate the production of waste during design, construction, operation, and end of life in order to conserve natural resources.

EQUITY
Supporting a just, equitable world

16 Human Scale + Human Places
The project must be designed to create human-scaled rather than automobile-scaled places, so that the experience brings out the best in humanity and promotes culture and interaction.

17 Democracy + Social Justice
Responsible design must be such that all people, regardless of background, age and socioeconomic class, can benefit from the externally focused infrastructure created by the project.

18 Rights to Nature
The project may not block access to, nor diminish the quality of, fresh air, sunlight and natural waterways for any member of society or adjacent developments.

BEAUTY
Celebrating design that creates transformative change

19 Beauty and Spirit
The project must contain design features intended solely for human delight and the celebration of culture, spirit and place appropriate to its function.

20 Inspiration and Education
Educational materials about the performance and operation of the project must be made public to share successful solutions and to motivate others to make change.