Green Portable Advocacy

Our campaign for healthier learning environments

"Meeting the needs of the current generation without compromising the ability of future generations to meet their own needs."

AGENDA

About our Work

The Portable Problem

The Case for Green Portables

Advocating in our schools

Collective Impact

GOALS

1. Articulate the moral, technical and financial case for Green Portables.

1. Explore policy and advocacy strategies related to green portables and green school construction.

1. Stay up to date on new developments in the field of school portables and learn about best practices.

1. Understand the national movement towards educating for sustainability.

1. Think creatively to more effectively and directly engage youth, educators, and curriculum directors in learning about the buildings they inhabit.
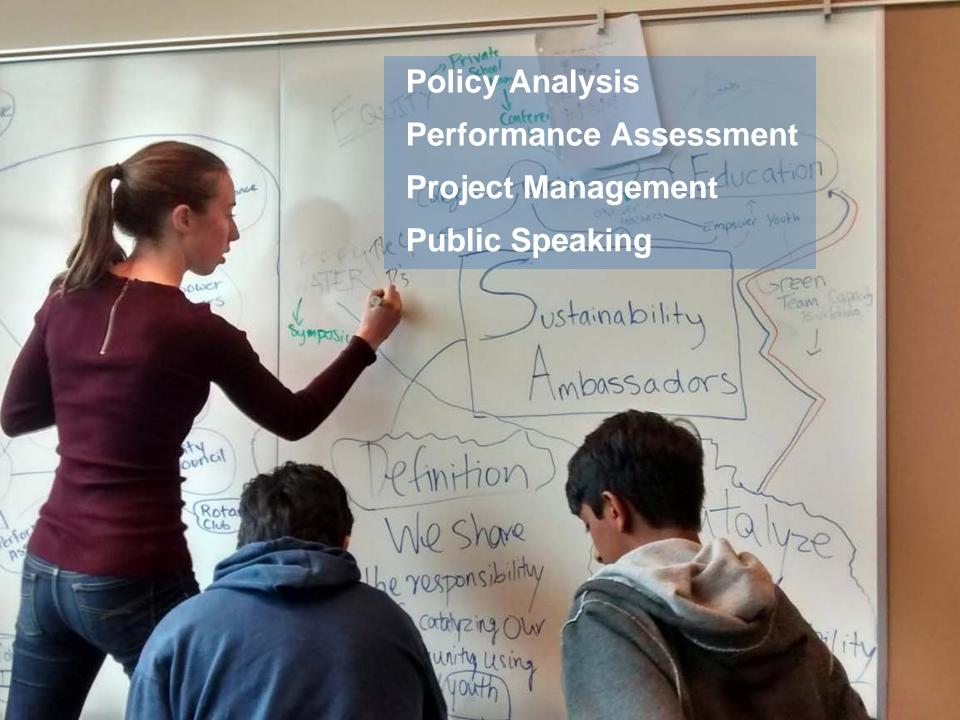
40 Ambassadors
8 School Districts
Private School Network

Empower youth
to catalyze community
sustainability

Sustainable Systems College

180 hours of professional training

Policy Analysis

Performance Assessment

Project Management

Public Speaking

Internship

Program

Equity Advocacy Internship Program

Engage youth of color from low income communities

Implement existing equity and social justice initiatives

Empower youth to lead community-up projects

Establish green jobs pathways for youth

Empower teachers to integrate rigor with relevance for community impact

Project Design Lab **3-Days/Summer**

Teacher Fellows **12-Months**

Real world learning in the classroom
results in…

Real world improvements in the community
therefore…

GPA = Sustainable Community

What's the problem with portables?

Green Portable Advocacy

Our campaign for healthier learning environments

2 Goals...

1. Advocate for green portables

1. Educate for Sustainability

4 Actions…

1. Build the Case

1. Benchmark

1. Broadcast

1. Embed into Curriculum

The Case for Green Portables

Moral Obligation
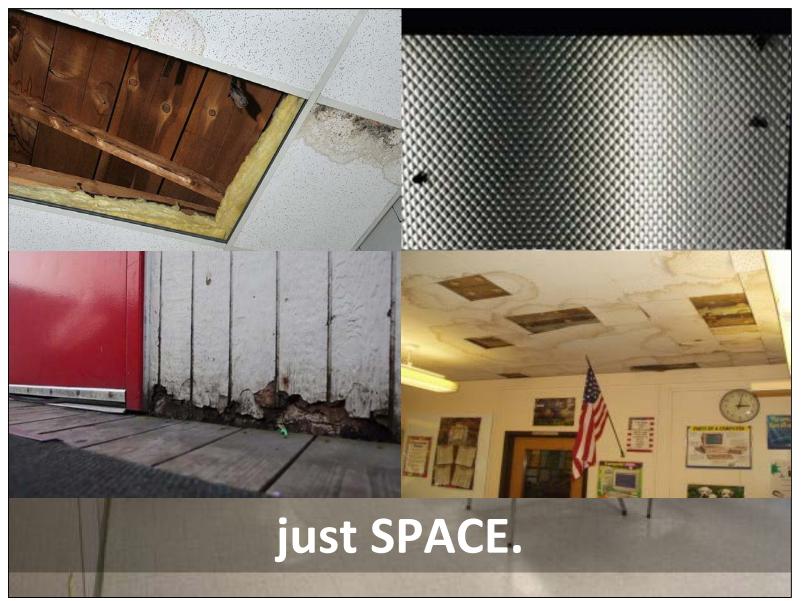
Technical Know How

Financial Payback

350,000 portables currently in place at schools across the US

150,000 more are forecasted to be installed in the next 2 years...

"standard" portable

just SPACE.

Most common problems:

Minimal ventilation from Poorly functioning HVAC

Poor acoustics from loud ventilation systems

Chemical off-gassing from high-emission materials

Water entry and mold growth

Site pollution from nearby areas (parking lots)
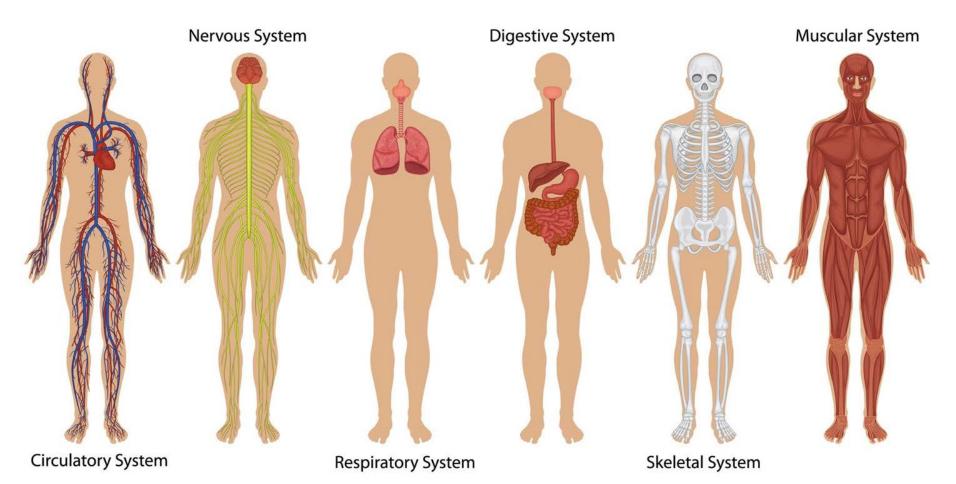
Impacts on student health and performance

Lower light levels can impact student alertness.
(Figueiro & Rea, 2010)

Low ventilation rates can decrease test scores and contribute to sick building syndrome.
Lawrence Berkeley National Laboratories

Lack of thermal controls can reduce comfort
Heschong, 2003, and Lackney, 2001

Technical Case

Human Body Systems

Nervous System

Digestive System

Muscular System

Circulatory System

Respiratory System

Skeletal System

Portable Improvements

Specify no or low emitting building materials

Install proper drainage and measures to prevent mold

Install programmable thermostats in existing and new

Place portables to maximize daylighting

Practicing proper maintenance

SAGE | *Smart Academic Green Environment*

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25-30 students

Last 30-40 years,

Use 45% less energy

Take 1/3 less time to build

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Satellite™
The First In Space

Portland
State
UNIVERSITY

High
Sloped
Ceilings

Steel Construction

Modular Design

SAGE
Smart Academic Green Environment

Aluminum Windows

Aluminum Windows

Bio-based Flooring

Aluminum Windows

Non-VOC Paint

Bio-based Flooring

HVAC systems reduce energy and generate 3x the fresh air

Aluminum Windows

Non-VOC Paint

Bio-based Flooring

HVAC systems reduce energy and generate 3x the fresh air

Up to 4x more window area

Aluminum Windows

Non-VOC Paint

Bio-based Flooring

What if... Every Portable was LIVING?

SEED Classroom
Sustainable Education Every Day

Living Building Challenge

PETALS

PLACE

WATER

ENERGY
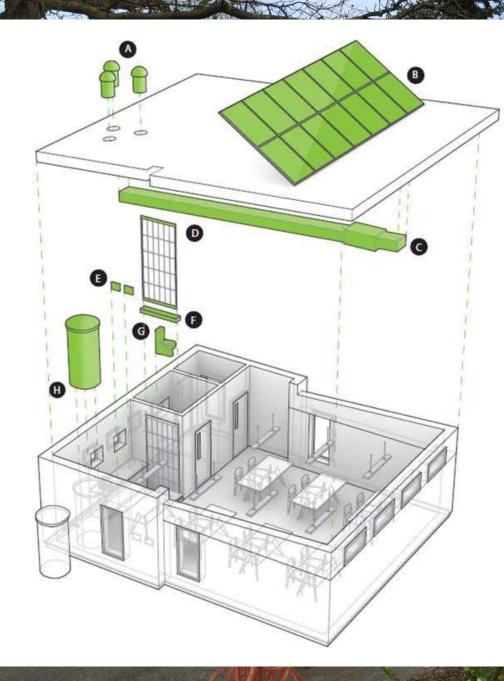
HEALTH & HAPPINESS

MATERIALS

EQUITY

BEAUTY

SEEDclassroom

A TUBULAR SKYLIGHTS

B SOLAR PV ARRAY

C ENERGY RECOVERY VENTILATOR

D FOOD PRODUCING GREEN WALL WITH INTEGRAL DRIP TRAY FED BY GREYWATER TANK

E ENERGY AND WATER DATA MONITORS

F HAND PUMP SINK FED BY INTERIOR CISTERN

G COMPOSTING TOILET

H PRIMARY INTERIOR CISTERN

Can buildings make us healthier?

HEALTH

Many buildings contain materials that make you sick. This classroom contains zero toxic chemicals, so it's keeping you healthy. We have CO2 monitors to make sure that the air quality is always at its best.

Can you think of ways to make both the inside and outside of buildings healthy for people that use them?

How can I learn more about my classroom?

BEAUTY

This classroom includes a handbook in which you can find out more about every piece of this place, and learn how it applies to other parts of your world!

What do you want to know about buildings? Look at your classroom, then go find out how other buildings are made. Design your own living building!

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Composting Toilet

Rainwater to usable water

Rainwater to usable water

Living Wall

Filters

Greywater

Create ❦ Educate ❦ Inspire

THE PERKINS
SCHOOL

EARLY K–5TH GRADE

"standard" portable

"green" portable

SEEDclassroom

$165K

just SPACE.

$300K

'greener' SPACE.
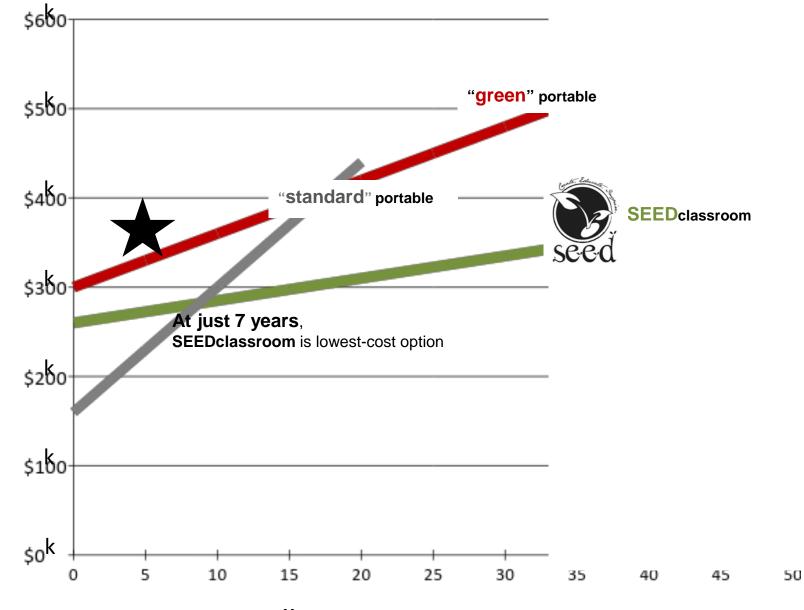
$260K

HEALTHY space that TEACHES.

Total Cost of Ownership (y-axis)

Years (x-axis)

"**green**" portable

"standard" portable

SEEDclassroom

At just 7 years, **SEEDclassroom** is lowest-cost option

Benchmark

Are any of the existing or new portables green portables?

How many new portables this year?

How many portables?

Benchmark

19
2016

13
2015

Benchmark

Broadcast

Broadcast

Grey

Blue

Green

NE 145TH ST

NE 138TH

NE 140TH ST

67 TA2

26

WOODINVILLE

NE 145TH ST

NE 133RD ST

32

NE 132 ST

2

60/63

4

25

6/13 6/13

3

82/89

NE 132ND ST

NE 128TH ST

NE 124TH ST

NE 128TH ST

NE 132ND ST

DENNY PARK

JUANITA

NE 116TH ST

7

New elementary - Clara Barton

28

NE 116TH ST

21

24

NE 112TH ST

KIRKLAND

85

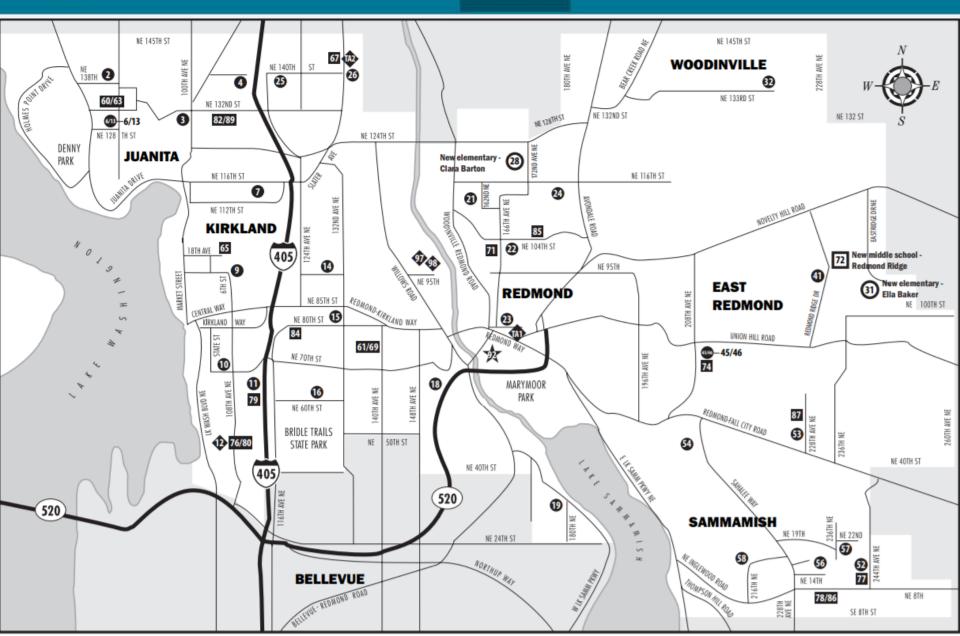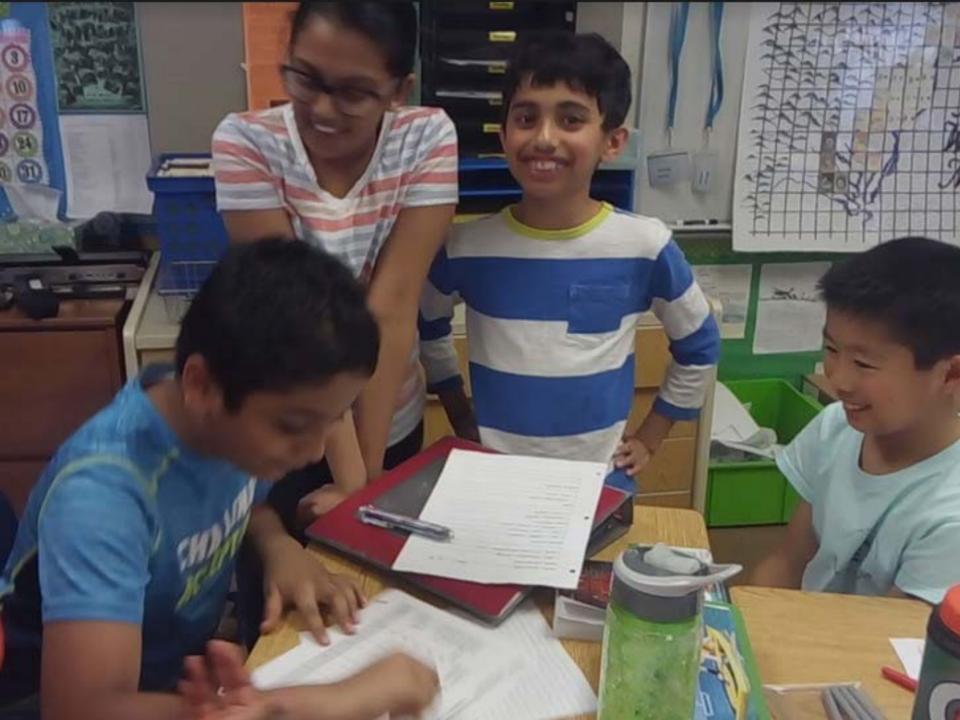18TH AVE

65

71

22 NE 104TH ST

9

14

97 98

NE 95TH

REDMOND

NE 95TH

EAST REDMOND

405

72 New middle school - Redmond Ridge

41

31 New elementary - Ella Baker

NE 100TH ST

CENTRAL WAY

KIRKLAND WAY

NE 85TH ST

REDMOND-KIRKLAND WAY

23

UNION HILL ROAD

15

TA1

45/46 45/46

74

84

NE 80TH ST

92

10

61/69

NE 70TH ST

MARYMOOR PARK

11

79

16

87

18

53

12 76/80

NE 60TH ST

54

BRIDLE TRAILS STATE PARK

NE 50TH ST

NE 40TH ST

LAKE SAMMAMISH

REDMOND-FALL CITY ROAD

405

520

520

19

SAMMAMISH

NE 24TH ST

SAHALEE WAY

NE 19TH

NE 22ND

58

56

57

BELLEVUE

NORTHUP WAY

52

77

78/86

NE 8TH

SE 8TH ST

BELLEVUE - REDMOND ROAD

LAKE WASHINGTON

N S E W

Embed into Curriculum

Understanding of Concepts Before and After

- Efficiency: Before 1.4, After 3.1
- Green Energy: Before 3.6, After 4.1
- Toilet Waste: Before 3.2, After 4.1
- Red List: Before 1.6, After 3.4
- Environment: Before 4.3, After 4.6
- Confidence About Green Building: Before 3.3, After 4.7

Before | After

**Green Building
Teacher Fellows**

RESPONSIBILITIES

Design Learning Pathways

Establish School-to-Work Opportunities

Facilitate District-Wide Adoption

Inform Stakeholders

Publish Community Curriculum Case Studies

$5,000   Fellow

$3,000   recruit, coach, curate, publish, follow

$2,000   stipend
12 month commitment

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$3,000   recruit, coach, curate, publish, follow

$2,000   stipend
12 month commitment
REACH
125 students / day
5 faculty / department
20 faculty / district
88 districts in Puget Sound

$50,000 | Ten Fellows

Founding Program Partner

Co-Founding Program Partner

Fellows Sponsor

National Action Plan for Educating for Sustainability Timeline

2014

Establish communication platform for the EfS movement that will support growth of network and can serve to track key performance indicators

Organize working groups to study and implement key recommendations; prioritize formation of a funding campaign

Share and distribute models (district and state policies; standards; best practices in content, materials)

By June 2014

Establish the United States Teacher Education for

2015

Include EfS-related content in the next revision of the ISLLC 2008 Standards for educational leadership

Agree on shared terminology and key messaging about EfS; distribute widely

Meet target audiences (education stakeholders, policy makers and the general public) where they are with education and awareness about EfS via professional associations, in schools and through mainstream media outlets

Hold year 1 of 3-year "research to practice" summit series to develop robust EfS research agenda. (Cultivating the Globally Sustainable Self: Summit Series on Transformative Teaching, Training, and Learning in Research and Practice, held at James Madison University in Harrisonburg, VA

2020

Make available to all school districts professional learning coaches fluent in EfS

2023

Ensure school district-level sustainability professionals are common members of district leadership teams throughout the country

2024

Guarantee EfS is embedded into the process of learning to be a teacher

2017
2018
2020-2024
2025-2040

2018

Complete the alignment of EfS content with national standards for all core academic disciplines

Publish EfS-aligned teacher evaluation guidelines;

By 2025

35 states have adopted comprehensive green schools policy, which includes an EfS graduation requirement

By 2030

All 50 state boards of education have adopted teacher evaluation standards grounded in EfS

By 2040

All students graduate educated for sustainability.

THINK TANK

1. How can we solve the problem with portables?

1. How can we improve our campaign to solve this problem?

1. What can we do together to move towards green portables and reduce the need for portables?

1. How can we more effectively educate building inhabitants?

COLLECTIVE IMPACT

Common Agenda

Shared Measurement

Mutually Reinforcing Actions

Continuous Communication

Backbone

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