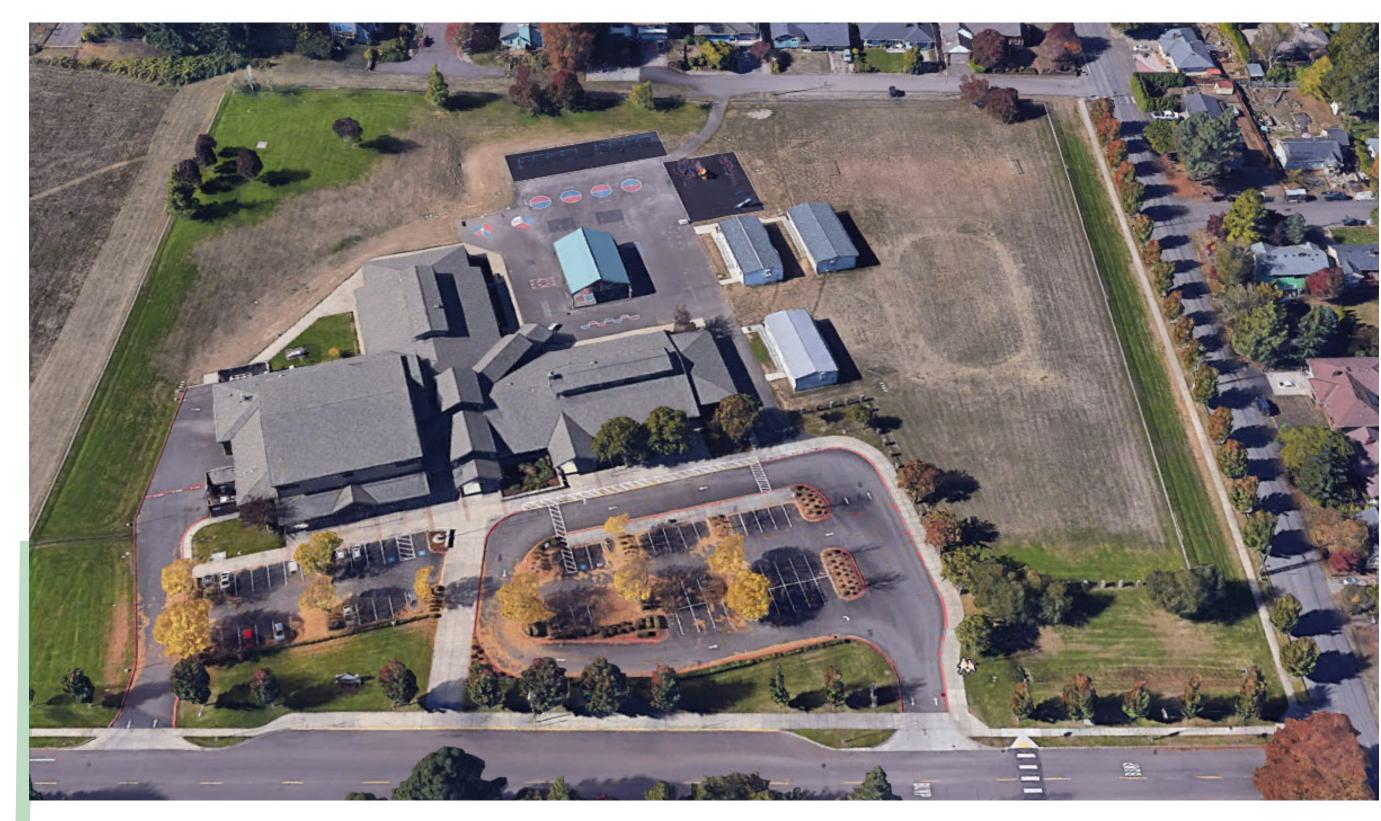
## GREENING OF SCHOOLYARDS

## CREATING HANDS-ON FIELD STATIONS FOR STUDENTS

HOW TO ADDRESS THE NEEDS OF SCHOOLS TO PROVIDE HANDS-ON LEARNING TO MEET NEXT GENERATION SCIENCE **STANDARDS AT THEIR SCHOOL?** 



#### Many school campus look like this:

- Very little natural settings
- Landscaping is minimal to parking lot trees, street trees and minimal landscaping
- Very little habitat and nature, therefore very small chance for direct observations and hands-on learning of science and STEM principals
- Limited places to sit and gather as a class, no outdoor classroom
- Limited access to features to support learning like specific gardens, sink/water spigot, display panels, interpretive signage
- Many curriculum lessons teach about non-local species, such as polar bears,

**Opportunities to engage students:** 

**SMALL** 

**MAMMALS** 

Practice observation

Provide unstructured

**INSECTS** 

REPTILES &

**AMPHIBIANS** 

time to explore

Build confidence

Learn to be

skills daily

#### Kids have less and less chances to experience NATURE, an "extinction of experience"

As Robert Michael Pyle stated at this conference a couple of years ago, kids are lacking spaces, places and opportunities to explore and fall in love with nature, to understand it on a level where they feel

We have the opportunities to partner with local agencies and non-profits to increase access to nature on school campuses. Green Schoolyards is now a movement with lots of support and backing by science for its benefits:

- Improves academic performance
- Provides equitable and inclusive nature experiences for all
- Reduces stress and calms
- Promotes hands-on learning
- Creates skills building and careerfocused learning for the next generation of us!

#### Books and resources that showcase and encourage US to help change our landscape, share our love of nature to inspire the next generation:

PREPARED BY:

mature +

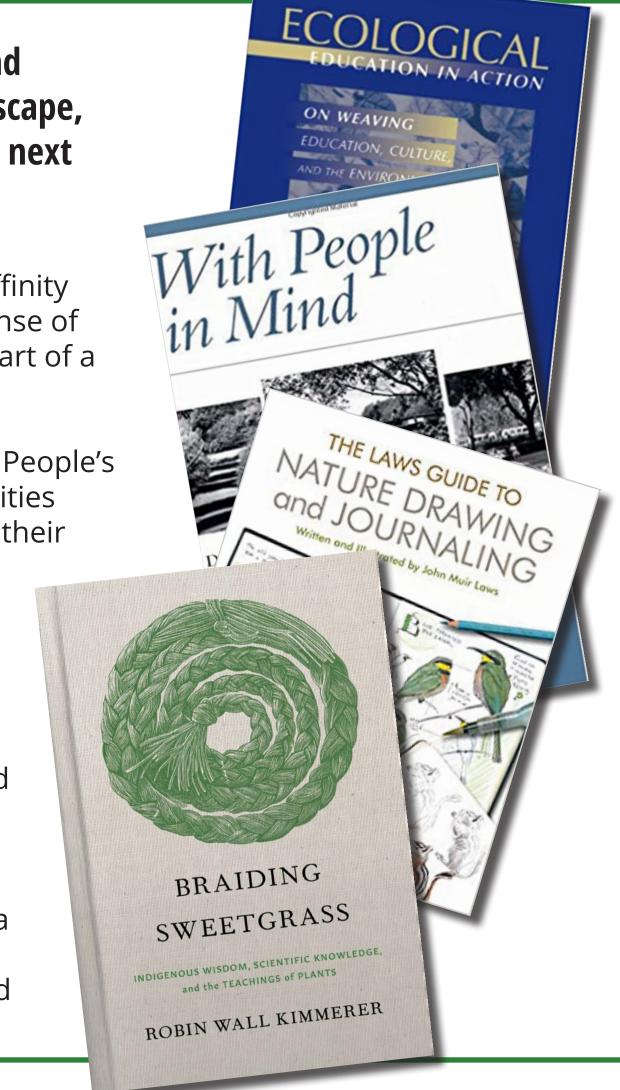
"What are the principles of ecological education....Development of personal affinity with the earth.....Ground learning in a sense of place.....Create an experience of being part of a larger community"

"People care deeply about information....People's fatigued mental state is restored by activities that are fascinating and compatible with their purposes. All of us rely on mental

"You can train yourself to be more curious. Be active, bold, intentional, and playful in your questioning. Seek out mysteries and the world opens itself to you."

"Philosophers call this state of isolation and disconnection "species loneliness" - a deep, unnamed sadness stemming from .....the loss of relationship." {to plants and

U.S. FISH & WILDLIFE



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#### **Adding native habitat** attracts native wildlife:

Increase presence of native species on site for observations

### Diversify plantings and habitat features to attract a wide range of species

& OVERSTORY

# **MAMMALS**

UNDERSTORY

LARGE

**BIRDS** 

### **Allow students to create** the questions:

Borrowing from John Muir Law's teachings on nature drawing and journaling

"I NOTICE....."

comfortable in outdoor settings Overcome fears

(bugs, getting dirty, getting lost, unknowns etc.)

> Career-focused mentoring / skills building

> > Participate in stewardship projects

Reduce stress, being in natural settles calms

Support social / emotional learning

→ MONTHLY ----

Support teaching all curriculum types

#### **Engaging our regional partners to help connect** kids to nature and expand their understanding:

Many students do not have access to nature beyond a manicured park or school ground. If we help them gain understanding and confidence at school, then they will be ready to engage with partners on the big field trips off campus. Kids need to feel safe, based on their understanding of nature.

## ■ Speak the same language as teachers - Align your

What can YOUR organization do to help schools?

- environmental education to the Next Generation Science Standards and other curriculum goals
- Introduce topics in classroom Prepare short lessons (30-40 minutes) to cover in a classroom setting, could cover multiple days. Outline expectations for learning and behavior &Set clear goals for activities
  - Train on school campus now take your lessons outside on their campus, start the "I Notice" conversations, what to see or explore
  - Take the big trip off campus now the students are ready to learn, hear and explore a bigger world, based on their knowledge







"I WONDER...."



When students have a chance to make daily observations, they gain confidence in exploring their surroundings.

→ SEASONALLY



These are just a few of the partner organizations in the

**Clark County Nature Network** working with students across Clark County.

**FREQUENCY OF OBSERVATIONS** 

#### **REFERENCES:** 1 Children & Nature Network. https://www.childrenandnature.org/initiatives/schoolyards/what-is-a-green-schoolyard/

2 Children & Nature Network - Schoolyards Hub. https://www.childrenandnature.org/initiatives/schoolyards/hub/

3 US Fish & Wildlife Service - Schoolyard Habitat Project Guide - https://www.fws.gov/external-affairs/marketing-communications/printing-and-publishing/publications/3012-Schoolyard-Habitat-Guide.pdf 4 Terrain.org - Interview with Robert Michael Pyle - https://www.terrain.org/2015/interviews/robert-michael-pyle/

6 John Muir Laws. 2015. *The Laws Guide to Nature Drawing and Journaling*. https://johnmuirlaws.com/ 7 Gregory Smith & Dilafruz Williams. 1999. *Ecological Education in Action - On Weaving Education, Culture and the Environment.* State University of New York Press. 8 Robin Wall Kimmerer. 2020. Braiding Sweetgrass - Indigenous Wisdom, Scientific Knowledge, and the Teaching of Plants. Milkweed Editions.

5 Rachel Kaplan, Steve Kaplan, Robert Ryan. With People in Mind: Design And Management Of Everyday Nature 1998. Island Press, Washington DC

**SCHOOL** 

Backyard

Fieldtrip

**PHOTO CREDITS:** 

WEEKLY —

1 Washington Department of Fish and Wildlife (J. Cummins, T. Sirdegas) 2 Google Earth (aerial view)

3 Partner organizations, as noted by their logo 4 Hough Elementary Green Team and Garden Club (J. Kleiner)







