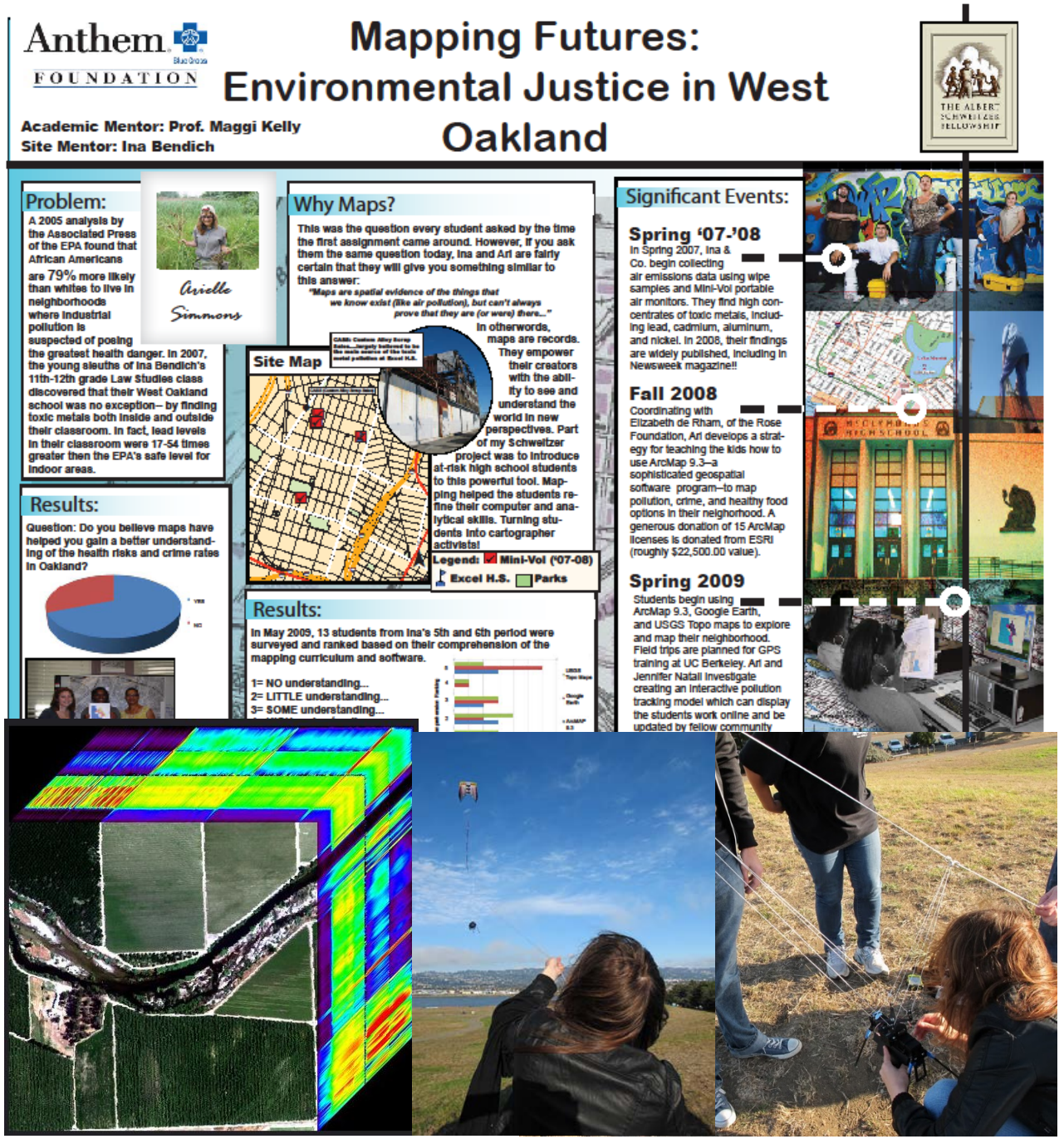
iSeaTree
iSeaTree
TreeMama.org
WA

Who am I?

Arielle Simmons-Steffen

Environmental Planner / Data Analyst

- MLA Environmental Planning, UC Berkeley (‘09)
- Focus: Watershed Restoration & Riparian Vegetation
- Data Driven Planner
- Youth Engagement



‘iSeaTree’ Development Goals

01

‘Remote-based’ &

‘Community-based’

& ‘Data-based’ (limited printouts).

Be youth focused.

Foster community discussion.

The Mission

Crowd-source, **Community**-based Data Collection.

Data is **Accessible** to the Public.

FREE Accessible Learning for All Ages (but focus is on **Youth**).

Make it **Easy**.
Make it **Local**.
Make it **Fun**.

QUOTE

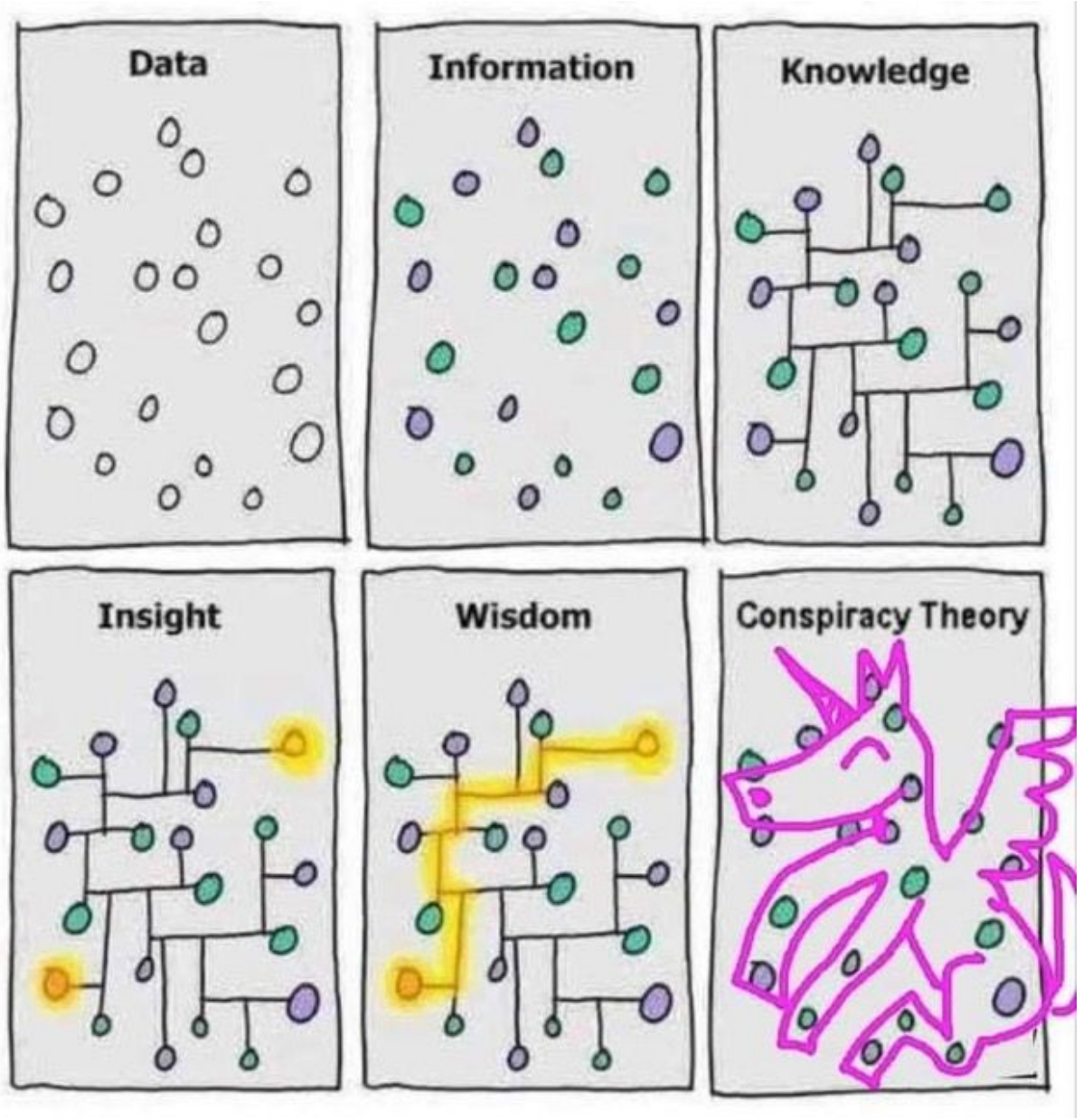
You can have data without information,

BUT,

you cannot have information without data.

- Daniel Keys Moran

Data-based Learning



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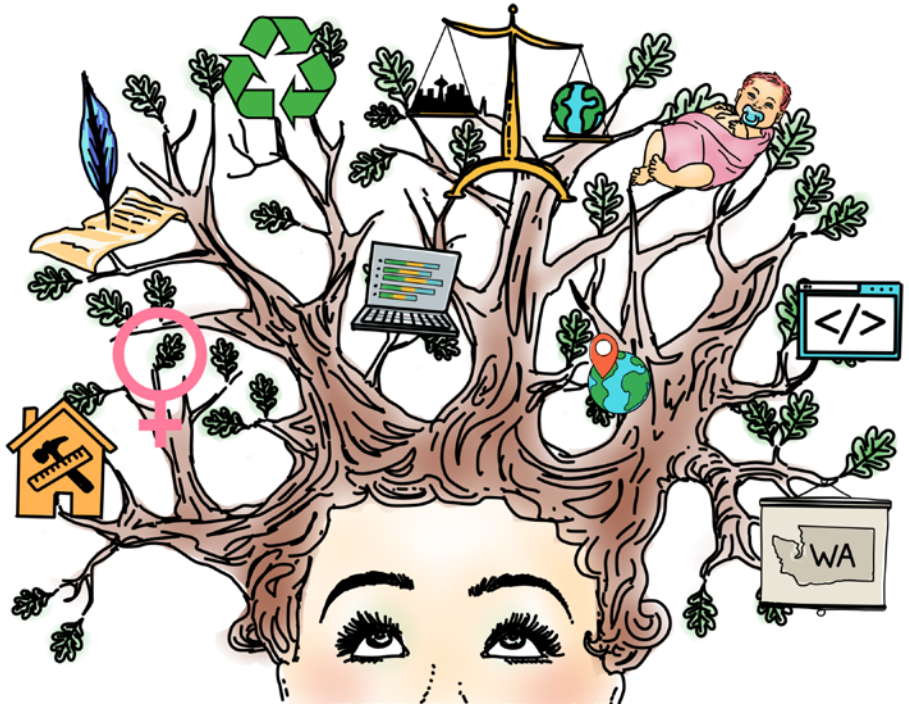

Data Appreciation through Understanding Trees

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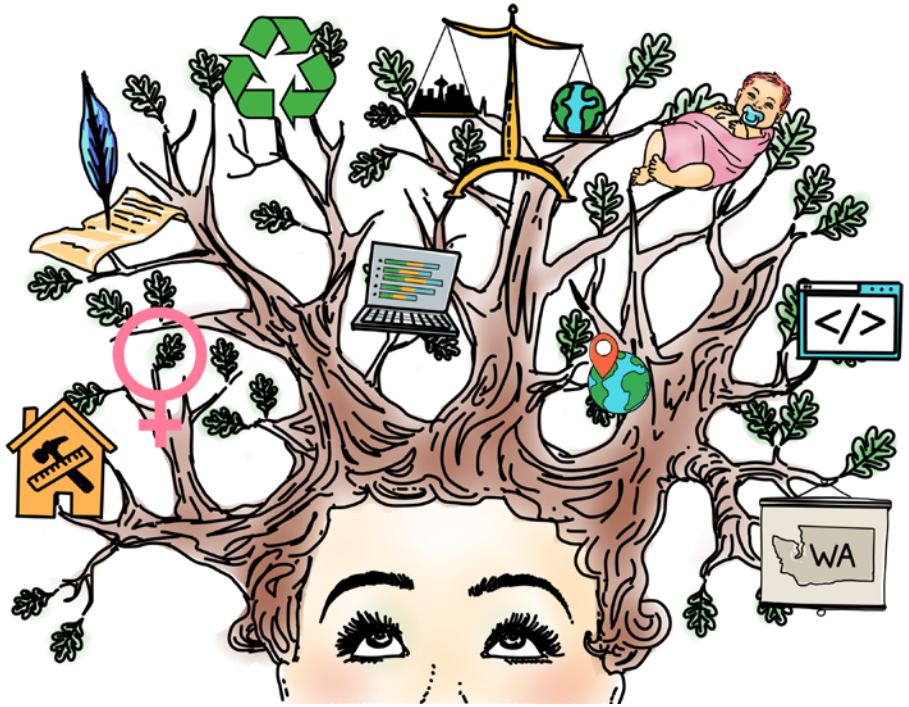

Tree Appreciation through Understanding Data

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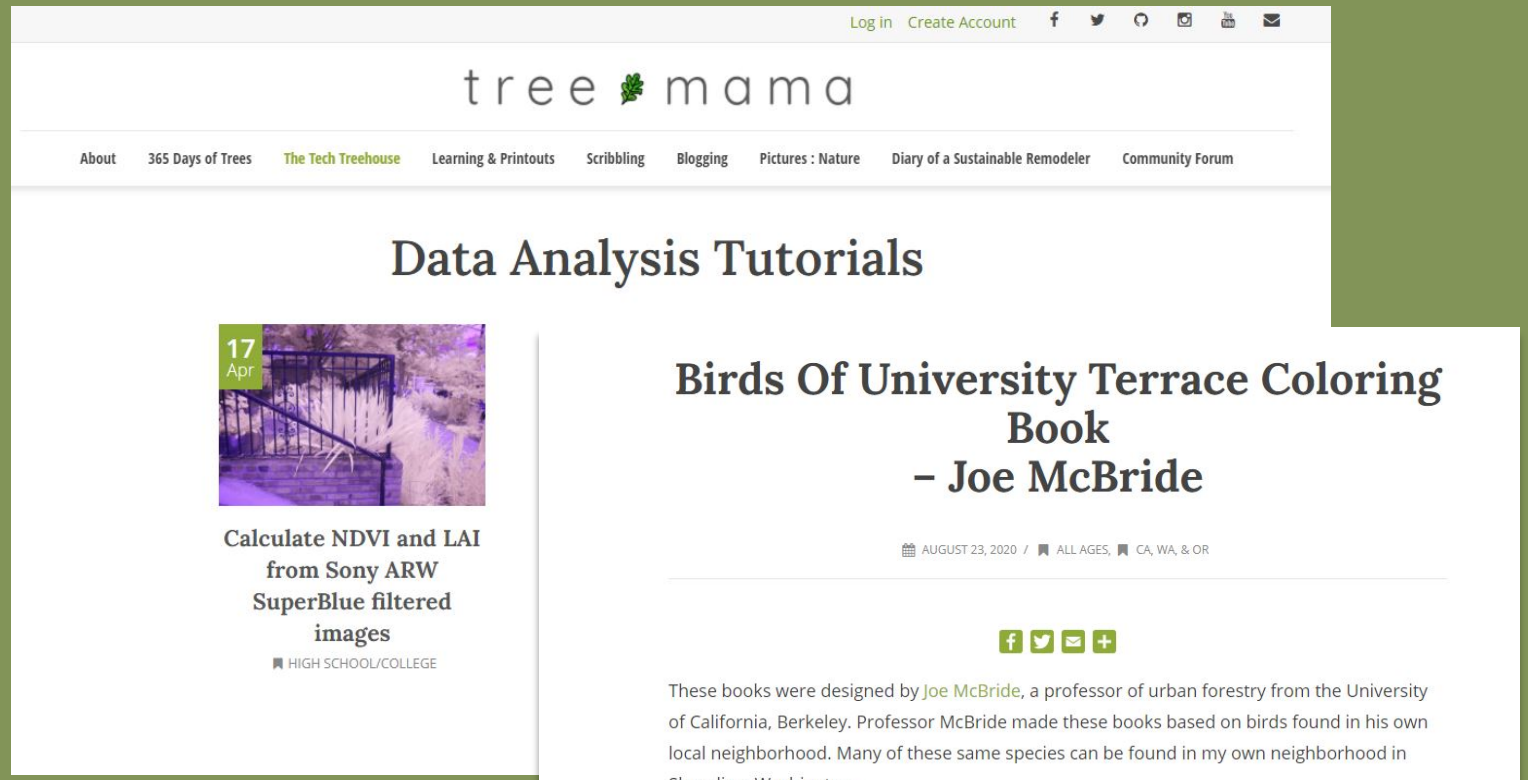


Birds Of University Terrace Coloring Book – Joe McBride

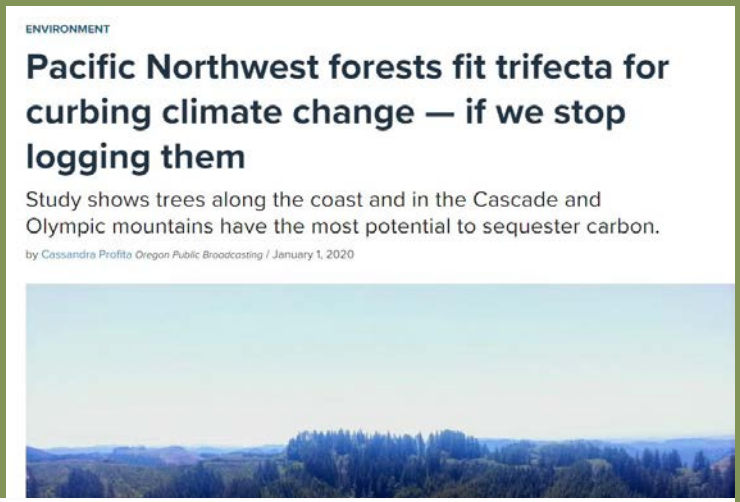
AUGUST 23, 2020 / ALL AGES, CA, WA, & OR

These books were designed by Joe McBride, a professor of urban forestry from the University of California, Berkeley. Professor McBride made these books based on birds found in his own local neighborhood. Many of these same species can be found in my own neighborhood in Shoreline, Washington.

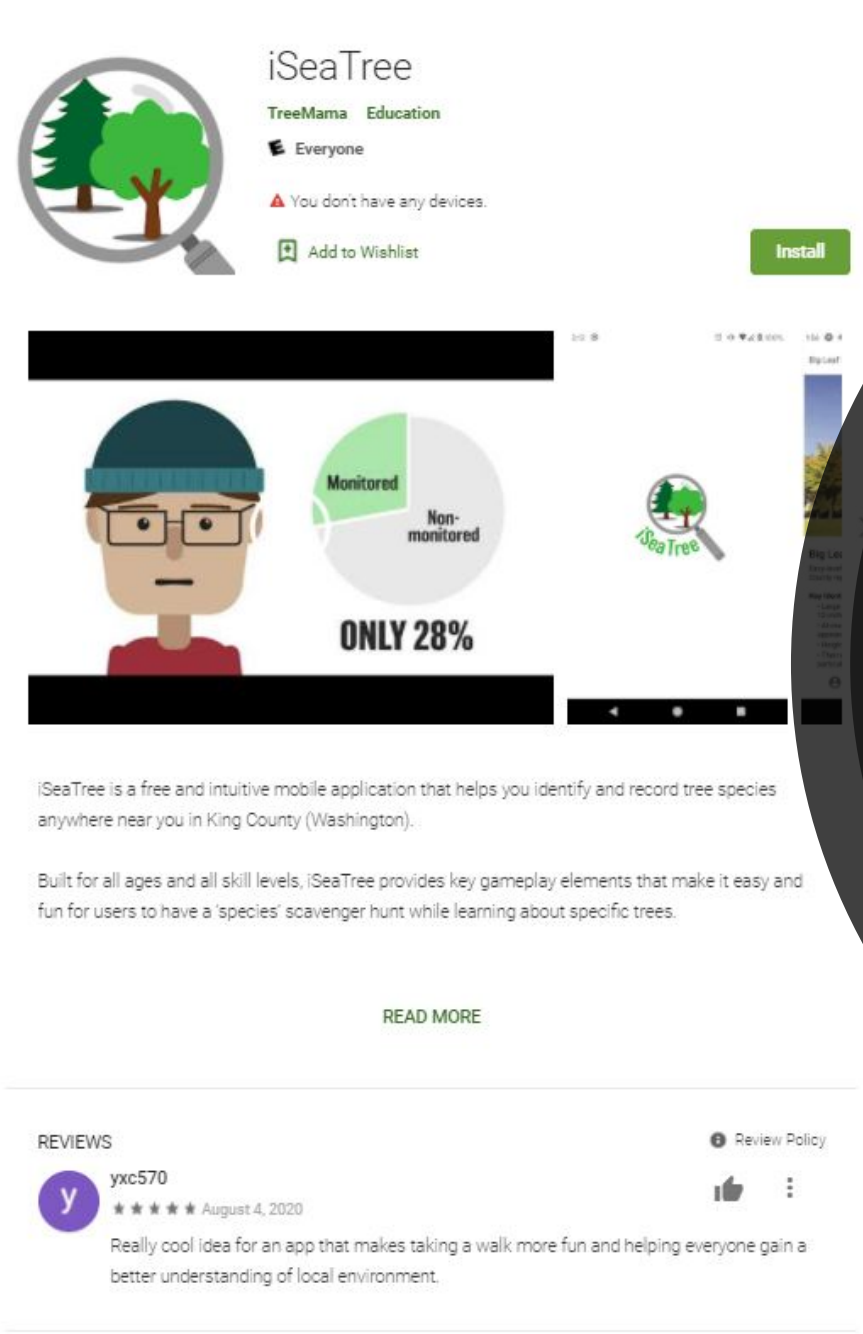
Even though I haven't lived in California for many years, it is a heartwarming to still have a piece of home to share with my children. Thank you Professor.

Download Links:

UT Bird Book | UT Coloring Book



Youth can do more for science then just study it …they can participate.



Build Community during COVID-19 (while still doing remote-learning).

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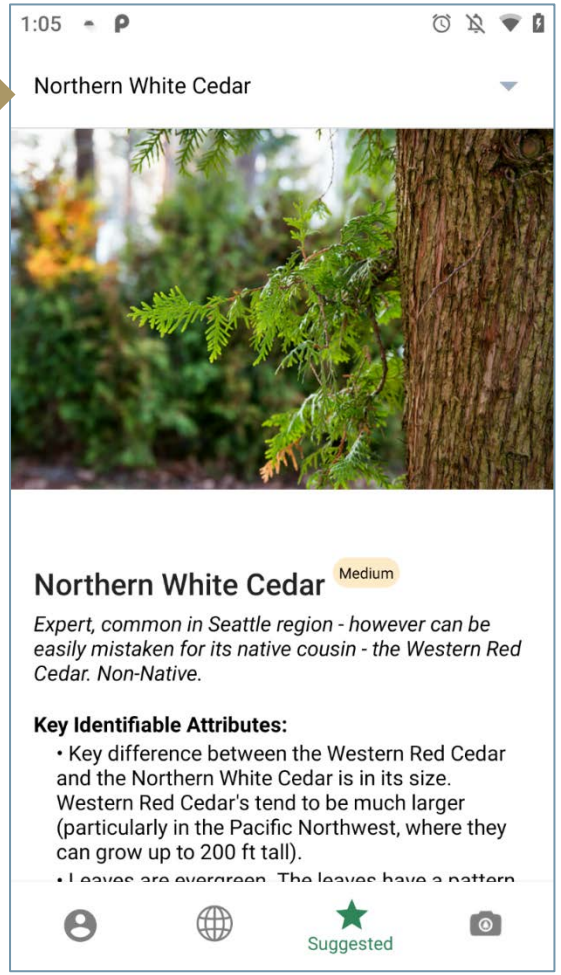
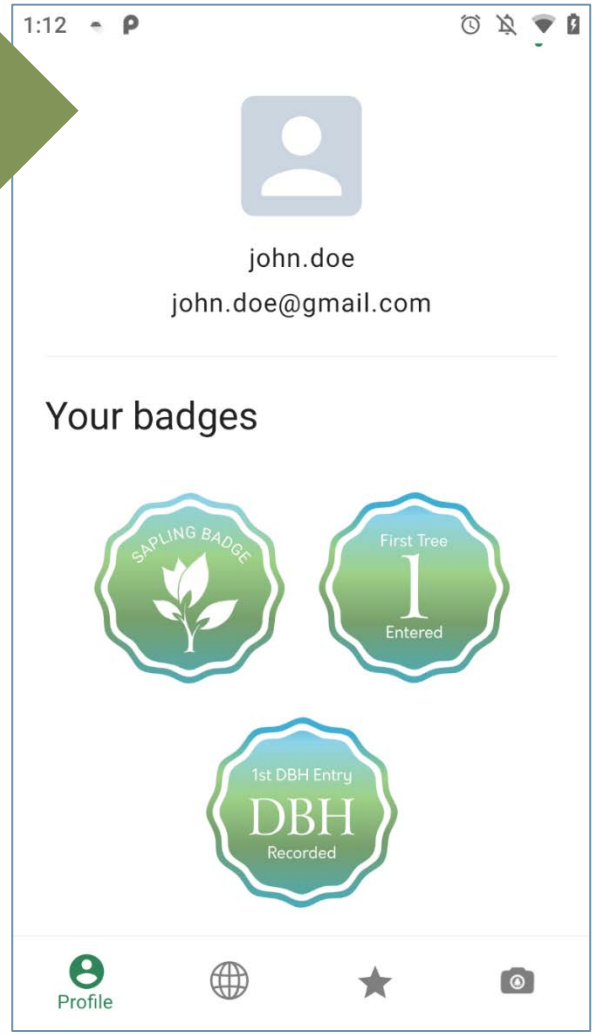
PNW Tree Info



Game Play



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Learning Game

McBride Methodology:

‘Start with the leaf/needle…count steps’

Easy → 1-2 steps →

Medium → 2-3 steps →

Expert → 4+ steps →

How many steps needed to Identify this Tree?

- 1-2 steps : ‘Easy’
  - Leaf / Needle Distinctiveness
  - + 1 other characteristic difference (bark, size)
- 2-3 steps : ‘Medium’
  - Leaf / Needle Distinctiveness
  - + another characteristic (could be seasonal)
  - + another characteristic (could be seasonal)
- 4+ steps : ‘Expert’
  - Leaf / Needle Distinctiveness
  - + another characteristic (could be seasonal)
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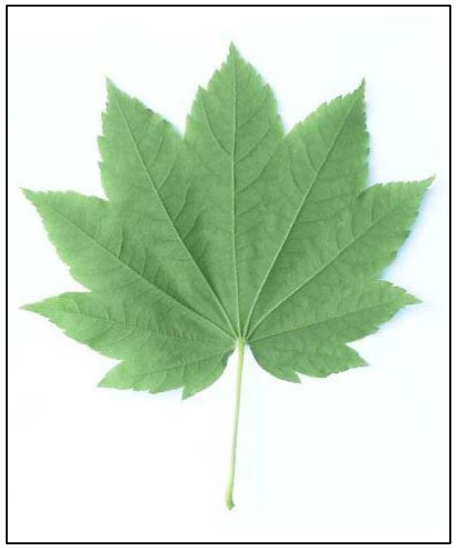
Learning Game

Acer – Maple

ID Number:7



COMMON NAME: Vine Maple
TYPE: broadleaf
SCIENTIFIC NAME: *Acer circinatum*
IDENTIFICATION DIFFICULTY: **Easy**
TAXA IT MAY BE CONFUSED WITH:
KEY CHARACTERISTICS: leaf palmately lobed with 7 to 11 lobes, almost circular in outline

Abies – True Fir

ID Number: 1

COMMON Name: Pacific Silver Fir
TYPE: conifer
SCIENTIFIC NAME: *Abies amabilis*,
IDENTIFICATION DIFFICULTY: **Medium**
TAXA IT MAYU BE CONFUSED WITH: *Abies grandis*
KEY CHARACTERISTICS: Ski jump shaped needles; they curve slightly upward in Pacific silver fir and lay flat in Grand fir

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Learning Game

Acer – Maple

ID Number:16

COMMON NAME: Norway Maple
TYPE: broadleaf
SCIENTIFIC NAME: *Acer platanoides*
IDENTIFICATION DIFFICULTY: **Expert**
TAXA IT MAY BE CONFUSED WITH: Other cultivars of Norway Maple and Acer saccharum. Leaves of Norway Maple are slightly broader than those of sugar maple.
KEY CHARACTERISTICS: Leaf blade width is greater than its height, giving the leaf blade a broad appearance

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In-App Remote Learning

Wrap a fabric measuring tape around the trunk at this height.

3 If using a string follow the same directions as above. Wrap the string around the trunk making sure to keep your fingers on the location where the beginning and end of the string come together.

4 Note the tree's circumference from the measuring tape or measure the length of the string to find the circumference of the tree.

** If the ground is sloped, measure 4 ½ ft (1.4 m) from ground level on the uphill side, mark the spot, then do the same on the downhill side. The average breast height is the midpoint between the uphill and downhill measurements.*

*** For a trunk that forks at a height less than 4 ½ ft, measure the circumference just below the fork.*

String

5 Convert the circufrence measure to diameter by dividing by pi (3.14)

$$\frac{5.5}{3.14} = 1.75 \text{ inches}$$

For multi-stemmed trees, repeat steps 1-4 for each stem and add all circumferences together. Convert the total circumference to diameter by dividing by pi (3.14).

Classroom-free Engagement

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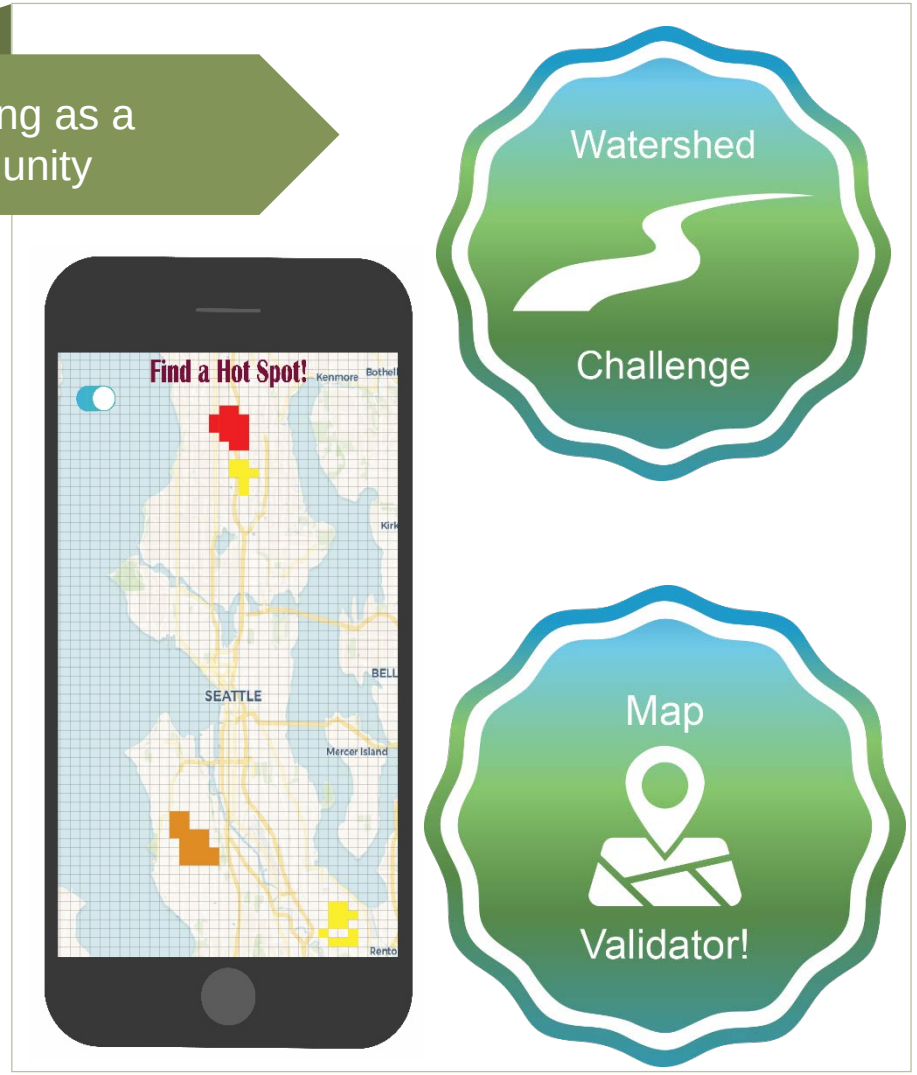
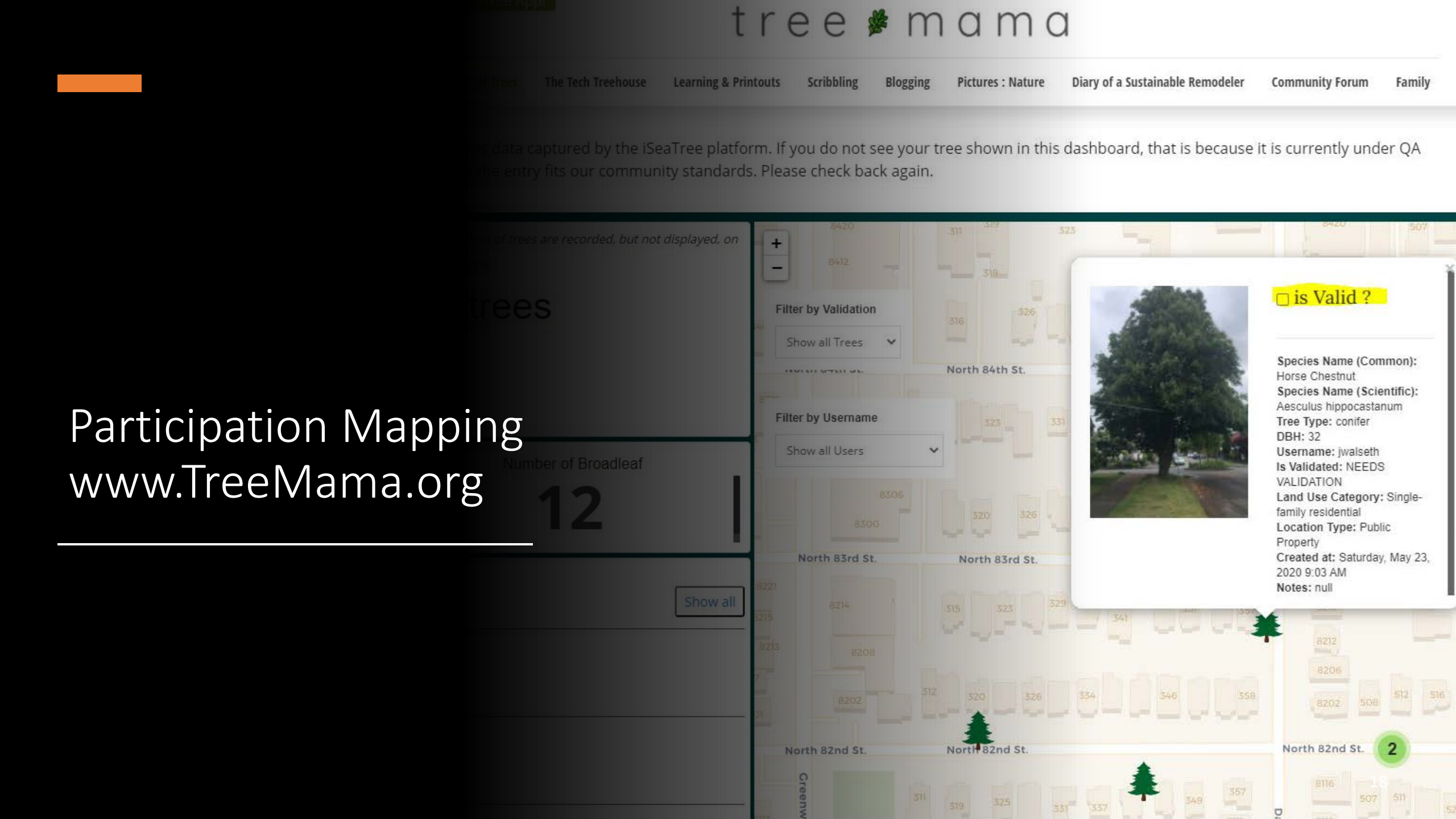
Learning as an Individual

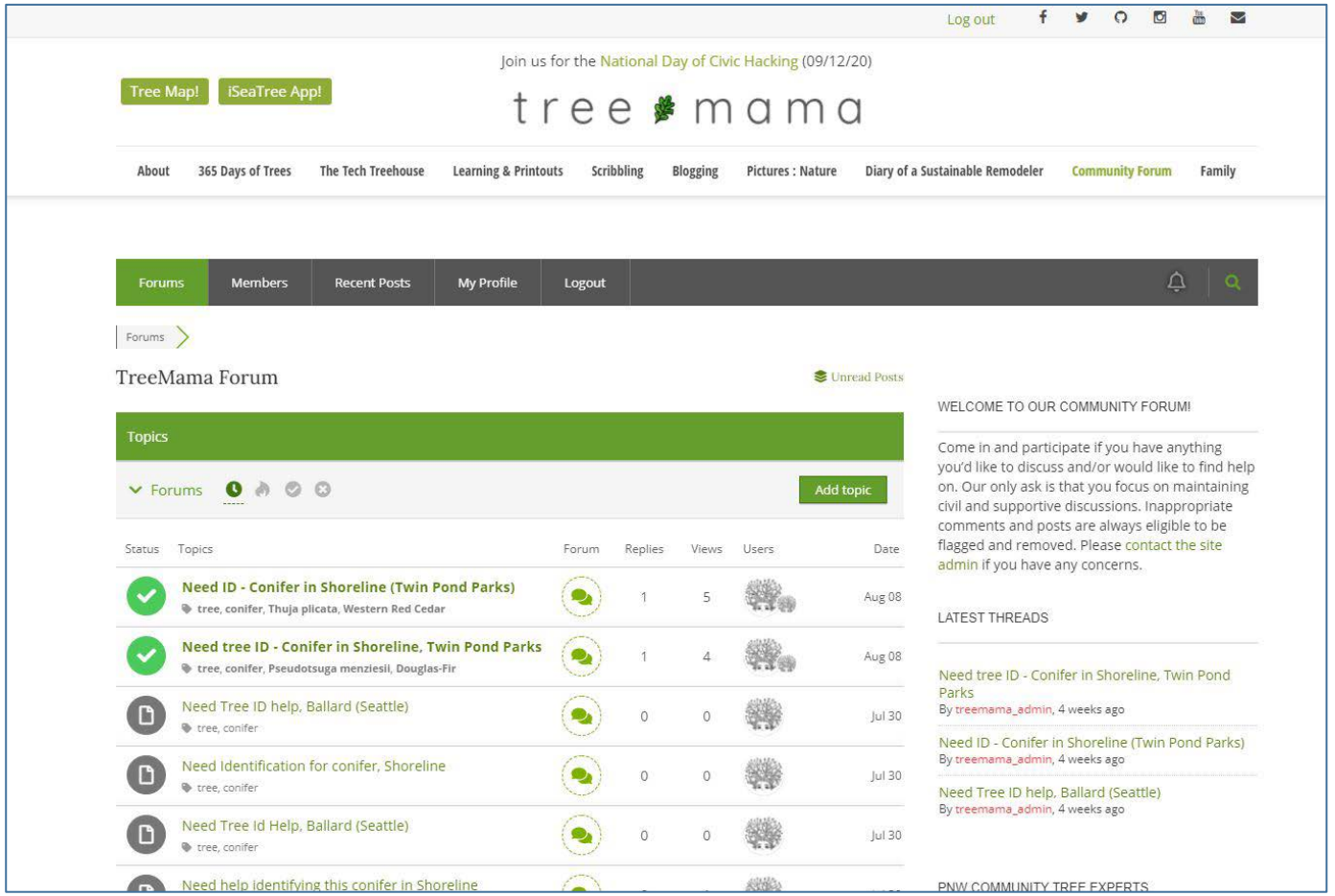
Learning as a Community



Participation Mapping
www.TreeMama.org

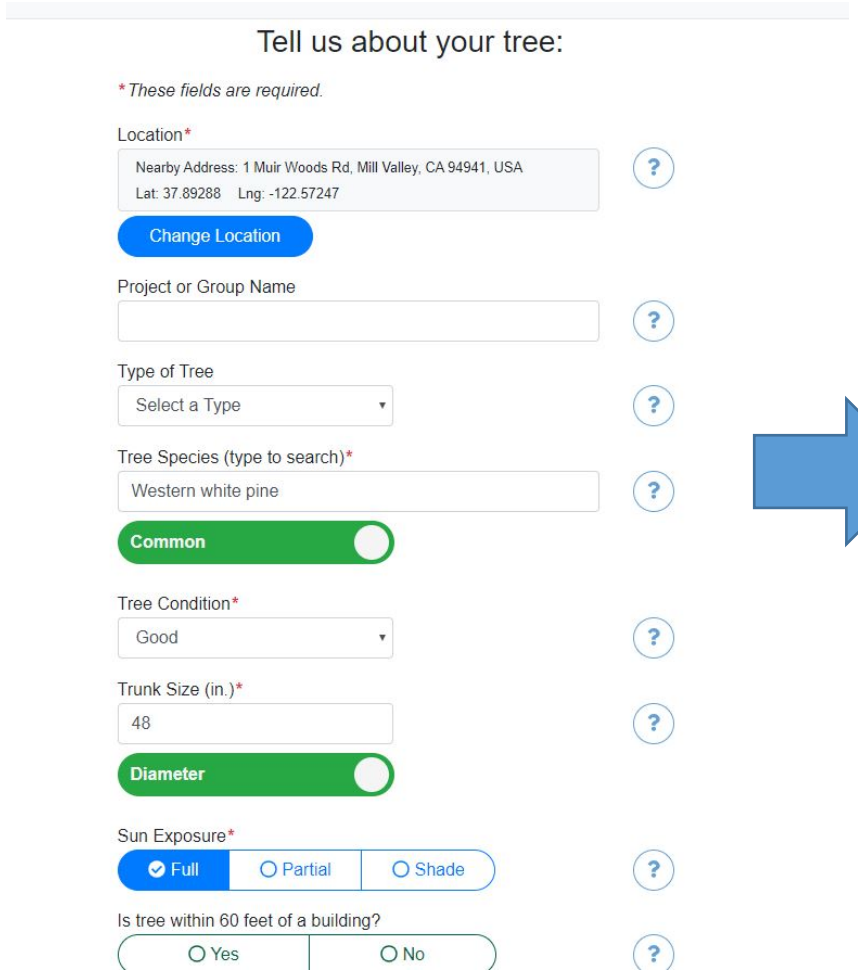


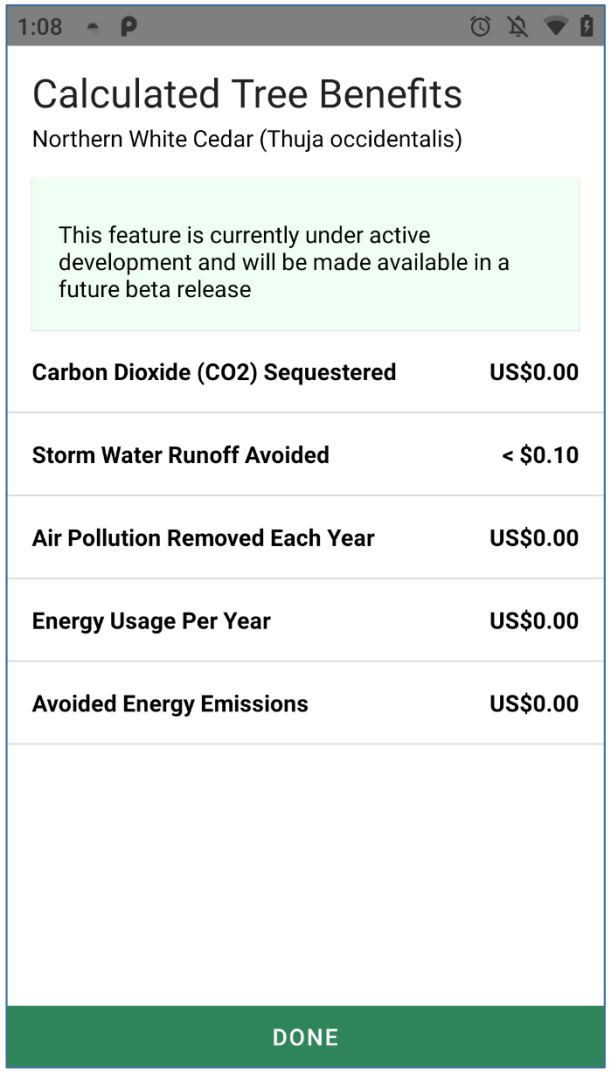
Community Discussion www.TreeMama.org

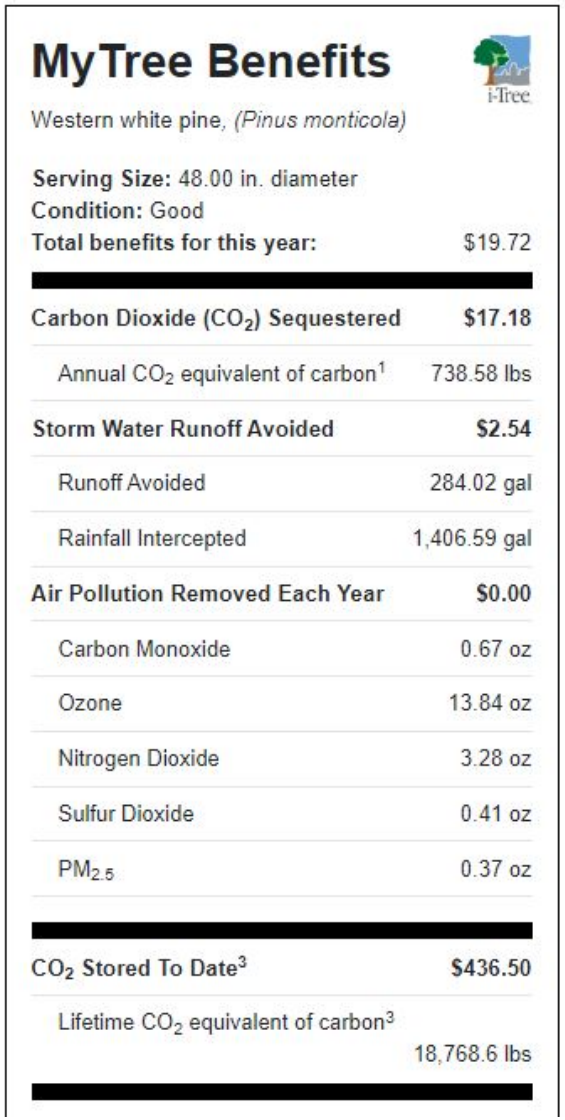


Using the iTree API

https://www.itreetools.org/about
https://mytree.itreetools.org/#/







Roadmap

V1 (MVP)

- Basic Data Collection Processing Tested and Working
- Simple Game rules in place: ‘ID Levels’, ‘Number of Trees’
- Map Validation Page and Forum are complete \
- V1 Public Release \
- Public Code Release

V2

- Educator Outreach
- ‘National Day of Civic Hacking’ (9/12/20)
- Add Zone Game Rules: ‘Watershed Challenge’
- Add K-5 Games: ‘Find a Pinecone’, ‘Find an Acorn’
- Finish ‘ID Levels’
- Add iTree API

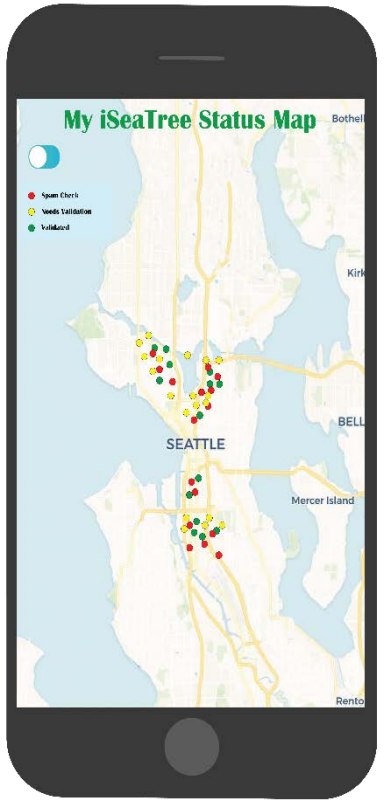
V3

- Educator Outreach / Curriculum Development
- Add Hot Spot Challenge

V4

- Node.JS / Firebase Upgrade.

July 2020 | Sept 2020 | Winter 2020 | Spring 2021



V2 (Map Updates)

ANY QUESTIONS

Any Questions