

Wonderful Waters

The Study of pH in the Elwha

By: Laurel, Roisin, and Salina (:

THE RAINBOOT CREW!

Question

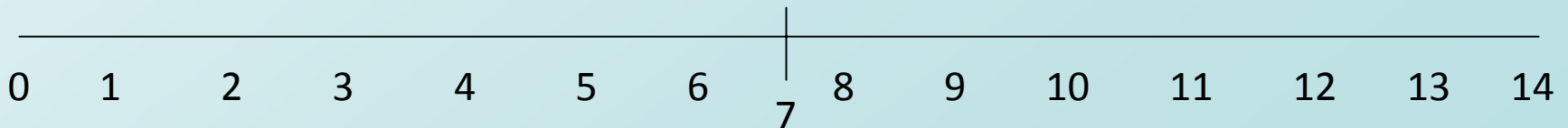
What effect does the river location have on the pH level in the Elwha River?



Background Information!

What is pH?

- the measure of bases and acids
- the scale goes to 14
- 8-14 is basic, 14 being the most basic
- 1-6 is acidic, 1 being the most acidic
- 7 is pure water!



Hypothesis

If we test the pH of the three different locations: the mouth of the Elwha, the old campground, and Lake Aldwell, then the river's pH will stay the same due to the fact that there is not an abundance of fish dying, and the water in the river all comes from the same source.



Materials!

- pH kit, bottle of indicator.
- 3 sites
- Waste bottle
- A camera, to document your findings

Procedure

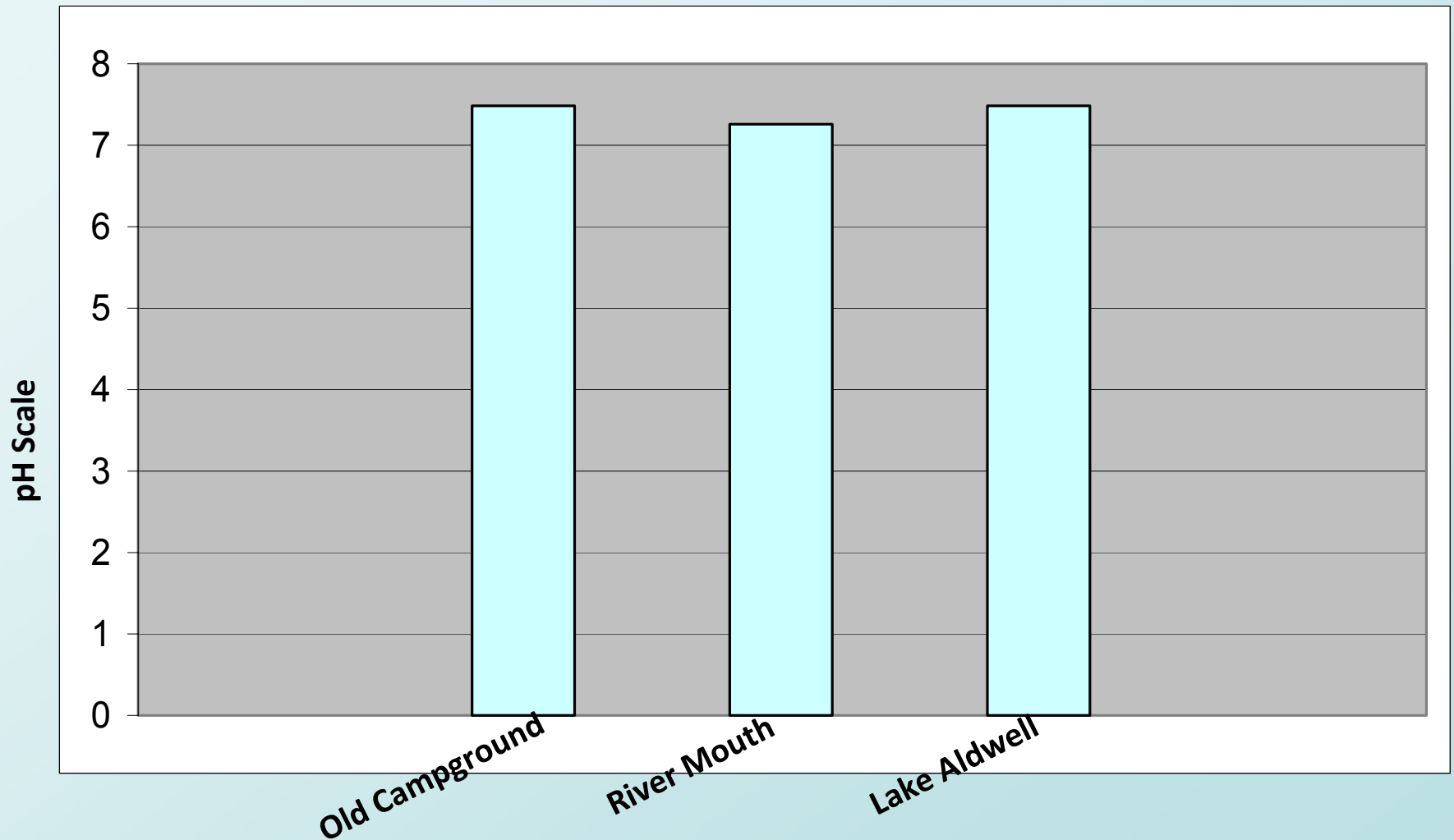
1. Gather materials/Quality check
2. Get on the bus (wonder-ful bus)
3. Arrive at Elwha, hike to river mouth
4. Wade out to the spot you choose to take water samples from
Be sure you have your water pH kit from Alaina!
5. Fill both vials to the first indicated line with Elwha River water, from the Elwha!
6. Take the vials back to shore
7. Place vials back into kit → **AKA, their test slots!**
8. Once vials are in place, add 6 drops of pH indicator to the vial that *isn't* behind the color wheel
9. Spin the color wheel **UNTIL THE COLORS MATCH! :)**

Procedure, continued.

10. Once the colors match, record the pH level indicated by the color wheel/test box
11. Repeat steps 4-10 for trials 2 and 3
12. Repeat steps 1-11 for second and third sites
[Old Campground and Lake Aldwell](#)
13. Paint your face with warrior paint!
14. DON'T FALL IN THE ELWHA RIVER!
15. Pack up and go home! :(

	<i>Trial 1</i>	<i>Trial 2</i>	<i>Trial 3</i>	<i>Average</i>
<i>Mouth</i>	<i>7</i>	<i>7.25</i>	<i>7.5</i>	<i>7.25</i>
<i>Campground</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>
<i>Aldwell</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>

pH of Water in Three Locations



Conclusion

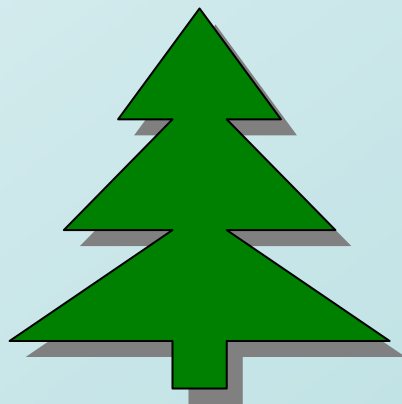
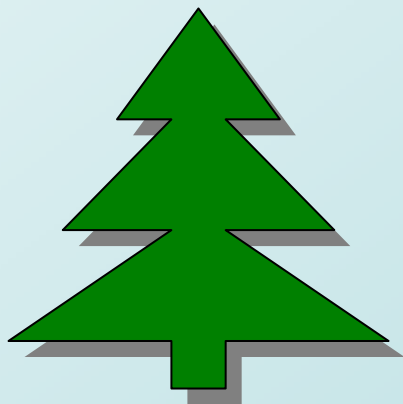
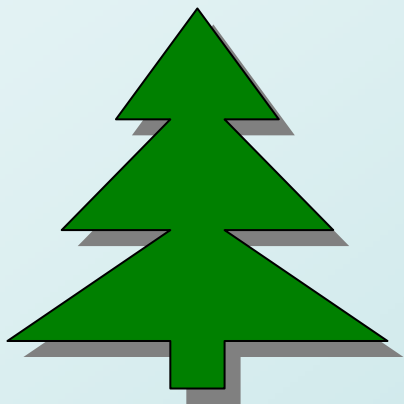
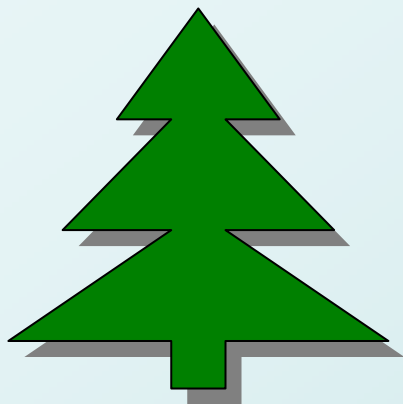
Slightly more basic, close to neutral

7.5 – 7.25

No drastic differences



Accuracy



Analysis



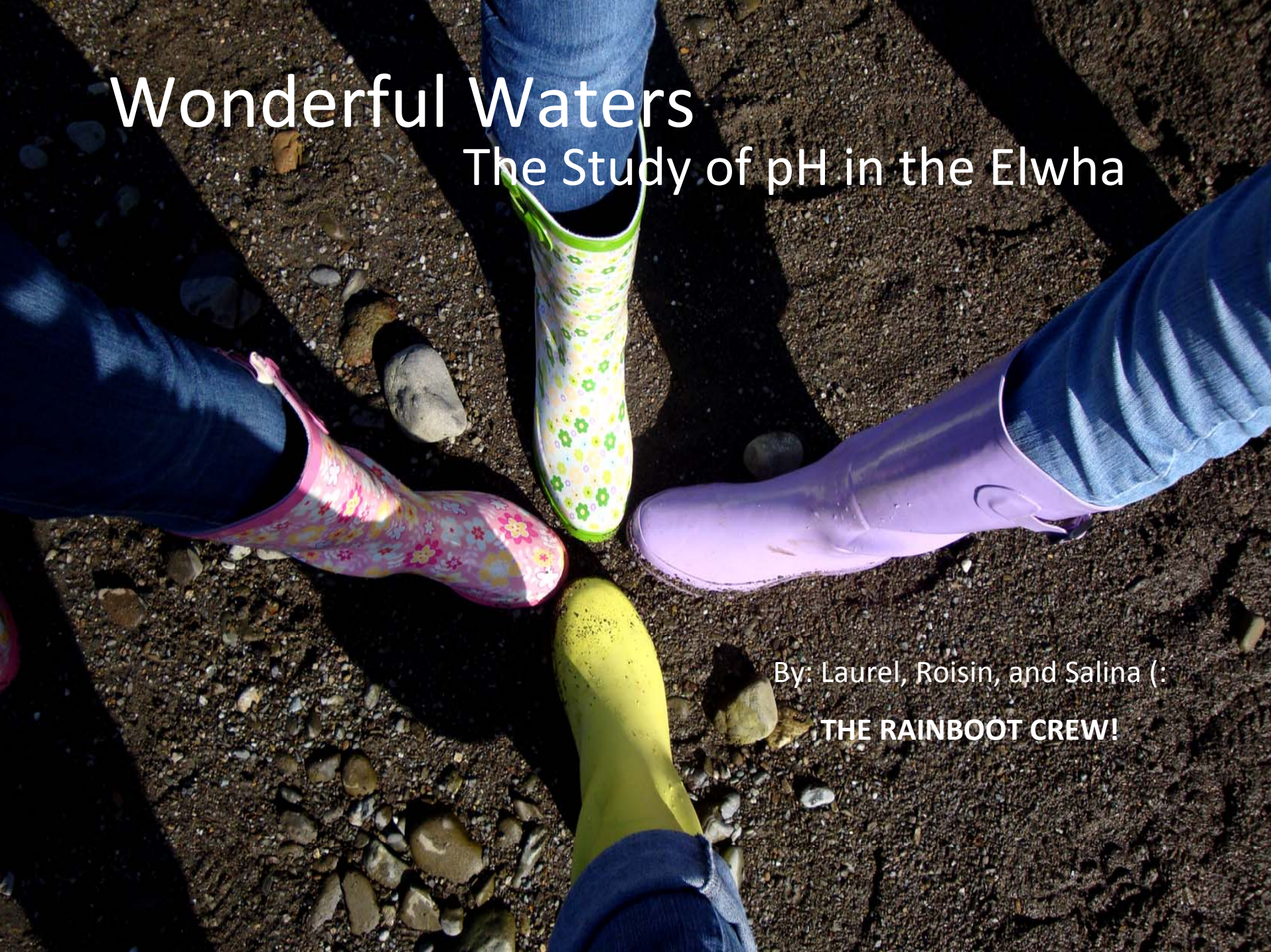
After the conclusion of our experiment, we thought long and hard about the results we came up with.

The water averaged at about 7.5 on the pH scale, which is just .5 more basic than pure water. We believe that this is because salt water is a low base

Thanks to...

Everyone here, for presenting us with this
Caroline and Alaina, for being our amazing
wonderful opportunity!
Mrs. Dadd, for allowing our scientific
abilities to take us to the Elwha!
♥ Satina, Roisin, Laurel

Questions? Comments?



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