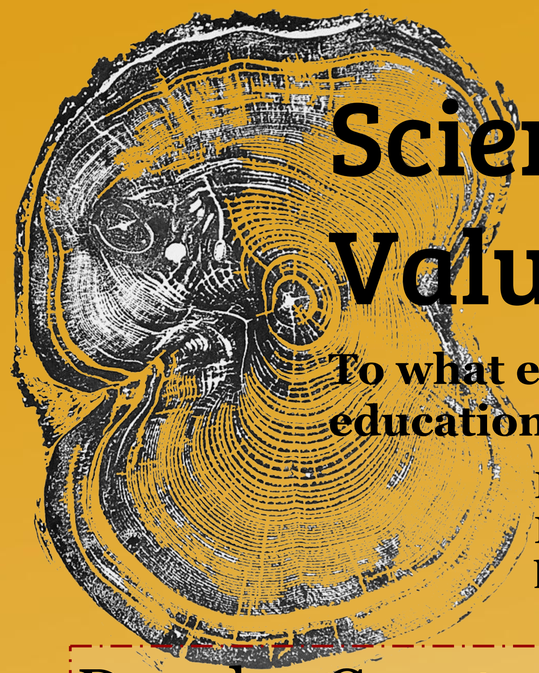

Science Without Values: A Paradox

To what extent should values be taught in science education in resource dependent communities?

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ENVS 350 Spring 2016
http://tiny.cc/ksprax

Douglas County, Oregon

- Resource dependent community
- Logging is extremely important to the local economy
- Alder Creek Community Forest Environmental Education program

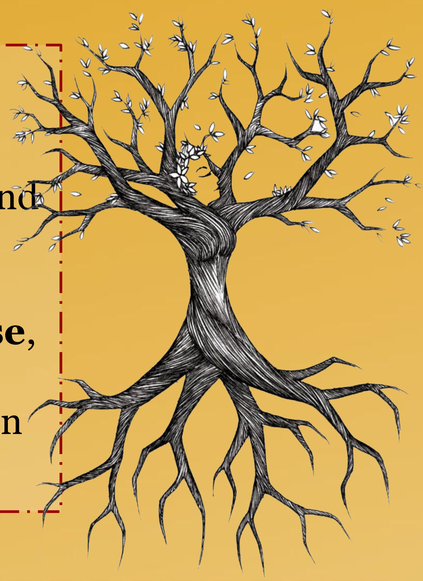
→ How are science and values taught at Alder Creek Community Forest (ACCF)?

Methodology:

- Interview with school coordinator at Alder Creek Community Forest
- Meeting with Douglas County commissioners
- Visits to Douglas County Courthouse, downtown Roseburg, BLM land, Alder Creek Community Forest

Chicken or Egg?

“Because **science is a human endeavor**, ethics, value judgments, and contexts of the people practicing the science fundamentally **pervade all aspects of the scientific enterprise**, including the questions asked and the methods used … science is ultimately in the service of society.” (Cooper 2012)

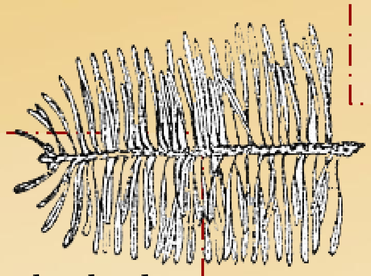


What now?

- **Citizen science**, in which students collect data and use that data to make value-based policy decisions
- “It may take genuine engagement among citizens, scientists, interest groups, and policymakers to rediscover a **shared ground common enough to lead to lasting policy**.” (Proctor 2009)
- Identify and use a **core set of shared concerns** to motivate the effort, be willing to respect and to learn more about the “other,” be able to work with new models and alternative taxonomies, and **allow for plurality and incompleteness**.” (Lele et al 2005)
- It’s important to have a **scientific grounding** in community issues so students have a basis for creating values
- **Values are imbedded in science**, so it’s important to **address the issues holistically**, to present students with enough information to eventually make their own value judgements

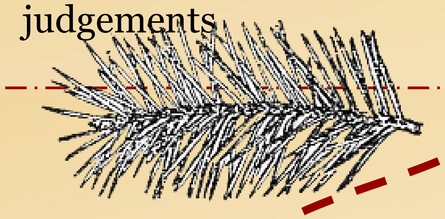
Our Place on Earth Curriculum: Results

- **Field-based learning** that incorporates NGSS
- Mapping, climate studies, adopt-a-plot program and digital technologies
- “How do all the **dimensions of their place** - hydrological, cultural, economic, biological, etc. - interrelate?”
- **Fact-based curriculum**, but values incorporated into some lessons



Biodiversity or Timber?

“prioritizing forests over other land uses, and certain forest management systems over others, means **valuing certain benefits and certain beneficiaries over others**…but science cannot settle the debate” (Lele et al 2005)



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