

Effective and Trust Based Research and Community Engagement

Space Science Institute x The Avarna Group

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Agenda

Part I | Community Informed Research

Part II | Community Informed Curriculum and Programs through the 4 R's

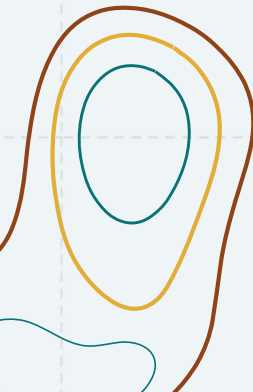
Part III | Small Group Reflection

Key Takeaways

- Be creative, collaborative and flexible
- Create community engagement strategies in service of **increased agency** for the communities you are serving

Part I

Community Informed Research



Why focus on community informed research?

Better research

Accounting for lived experience and producing applied research that provides tangible benefits to those most impacted

Breaking patterns

Marginalized communities have historically been harmed by outside research; community engagement can help to break those patterns of harm.



Legacy of systemic oppression in research

Forced Sterilization of Latinas

Misuse of Havasupai DNA

Henrietta Lacks



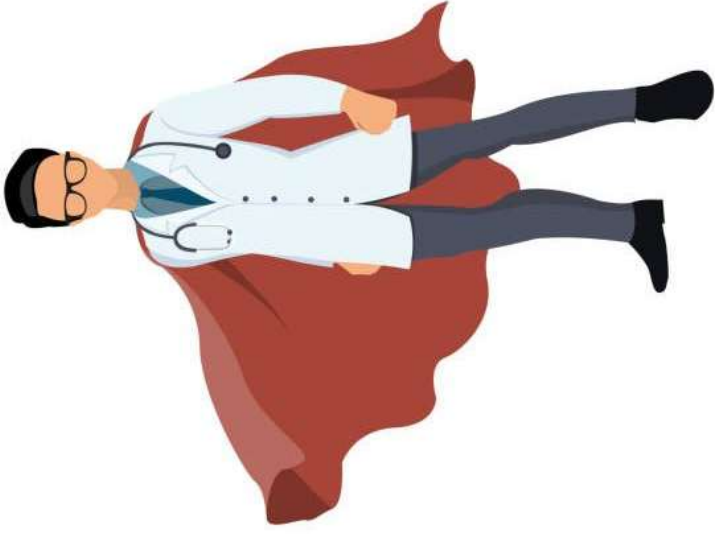
History of oppression in research

Researchers exploit marginalized communities for their own benefit. This happens through:

- **Taking credit** for community work
- **Failing to credit community members** for their participation and labor during the research process or program implementation
- Creating and **designing research projects that suit their career trajectories** rather than the needs of the community
- Misuse of community data



On-going paternalism in research



Researchers and outside experts have taken on paternalistic roles by:

- **Discounting community knowledge** as valuable or essential knowledge
- **Assuming community members are unreliable narrators** of their own experience and that researchers are objective observers
- Designing research/programs that center what they (rather than community members) think is most important

On-going oppression in research

Parachute science. Hallmarks include:

- **Funding** for science coming **from a large well-resourced colonial organization**/government or institution
- Scientists from well-funded entities “**parachuting in**” to vulnerable/frontline communities **to conduct research**
- No local expertise is involved
- Even if **local communities** and experts support the project, they are **not given credit**
- **Researchers**, institutions, and their funders are the **primary beneficiaries** of the research



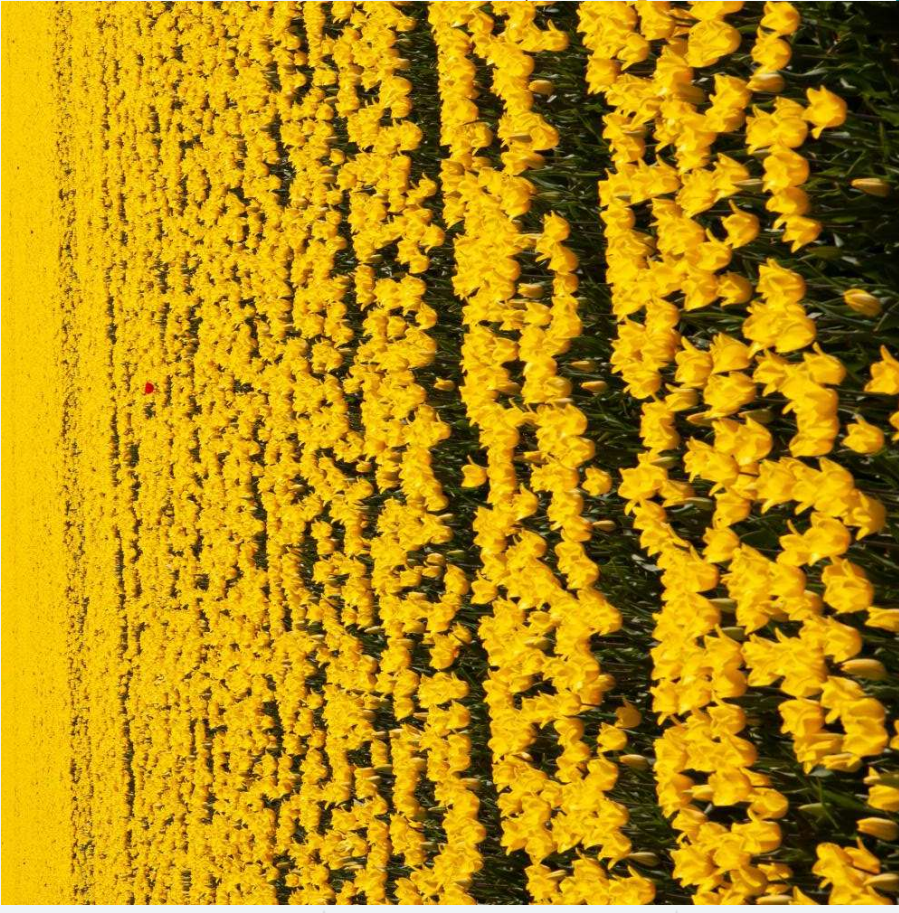
Misplaced and inaccurate blame in defining the problem

Blame for problems is placed on **individuals or communities**, rather than the root causes (which are systems/structures)



Myth of the monolithic community

Communities have often been **flattened into a single entity**, ignoring and erasing all of the various identities, experiences, needs, and views that exist within even the smallest communities.



Guiding questions and framing for better community engagement



Understanding Communities

- What is the community/**local history**?
 - What history shaped the community today?
 - How do community members tell the story of their home?
- What are the community's **culture and norms** (including language norms)?
- What are the **community's needs** (e.g. stats on health, income, education, etc.)?
- What **data** are already available (e.g., GIS maps)?
- **What is the community already doing** to address the issues you're interested in?

Understanding Yourself

- What is the **history of your institution/organization** and its relationship to marginalized communities?
- What are the **past engagement** and/or research efforts from your organization or similar organizations?
- Who is on your team and **how may your identities impact community engagement**?
- What are the **gaps** in the life experiences on your team?

Indigenous communities and Tribes

- Research their particular history
- Research the history of multiple tribes' presence in a landscape
- Honor the varying perspectives and experiences within tribes
- Research the conflicts within and across Indigenous communities
- Engage governments, community orgs, schools, and elders
- Respecting Indigenous knowledge by: (1) considering it equally valuable to knowledge produced by Western science, (2) respecting Indigenous data sovereignty
- Understand how current policies, programs, and structures in your organization may bolster or diminish Indigenous sovereignty

Part II

4 R's

Culturally

**Relevant, Revitalizing,
& Responsible, & Responsive**
Curriculum + Programming

“When those who have the power to name and to socially construct reality choose not to see you or hear you ... when someone with the authority of a teacher, say, describes the world and you are not in it, there is a moment of psychic disequilibrium, as if you looked in the mirror and saw nothing.”

-Adrienne Rich



THE 4 R'S: CULTURALLY...

...RELEVANT

means you connect your lessons to your learners' lives and culture



...REVITALIZING

means you sustain the culture and language of the learners' communities



...RESPONSIBLE

means you address bias and consistently present multiple perspectives



...RESPONSIVE

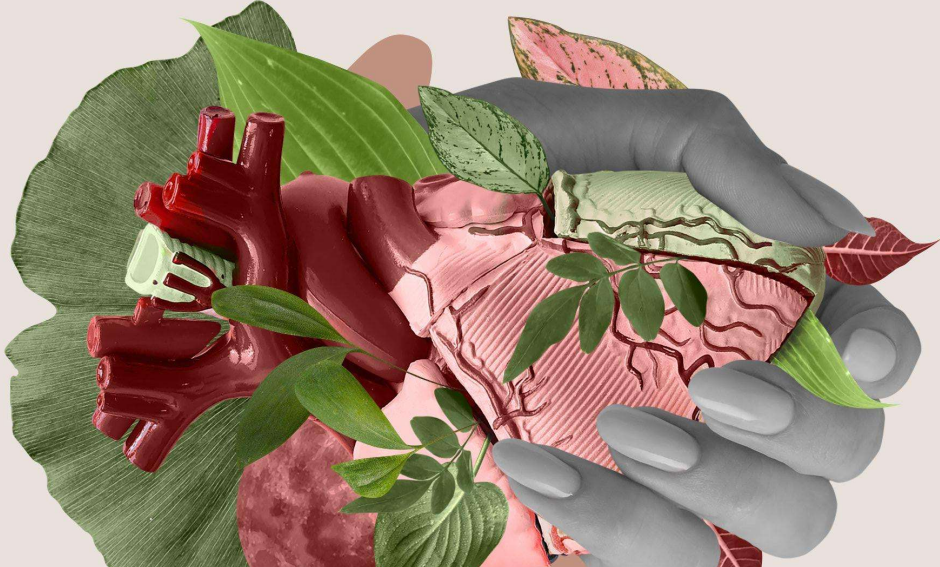
means you employ instructional strategies that reach all learners



CULTURAL RELEVANCE

Curriculum or program connects lessons to learners' identities, culture, values, and daily lives.

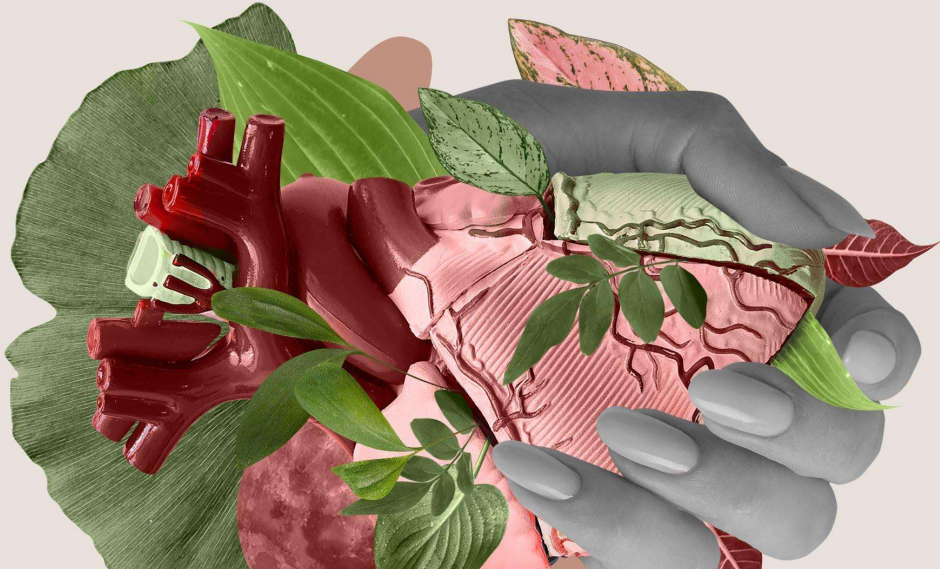
- demographics (age, race, nationality, gender, class, faith & education)
- day-to-day experiences
- values and culture (school culture, familial culture, community culture), cultural norms for intact groups



CULTURAL REVITALIZATION

curriculum or program supports learners in sustaining the cultural and linguistic competence of their communities.

- Does it center learners' language, knowledge, culture, and ways?
- Does it center learners' worldviews?
- Does it see the learner as a source of knowledge (instead of seeking to address a learner's deficit?)
- Does it connect learning to histories of learners' communities (and marginalized communities generally)?
- Does it address legacies of settler colonialism, affirm tribal sovereignty, and recognize the need to reclaim and revitalize what has been disrupted and displaced by colonization?

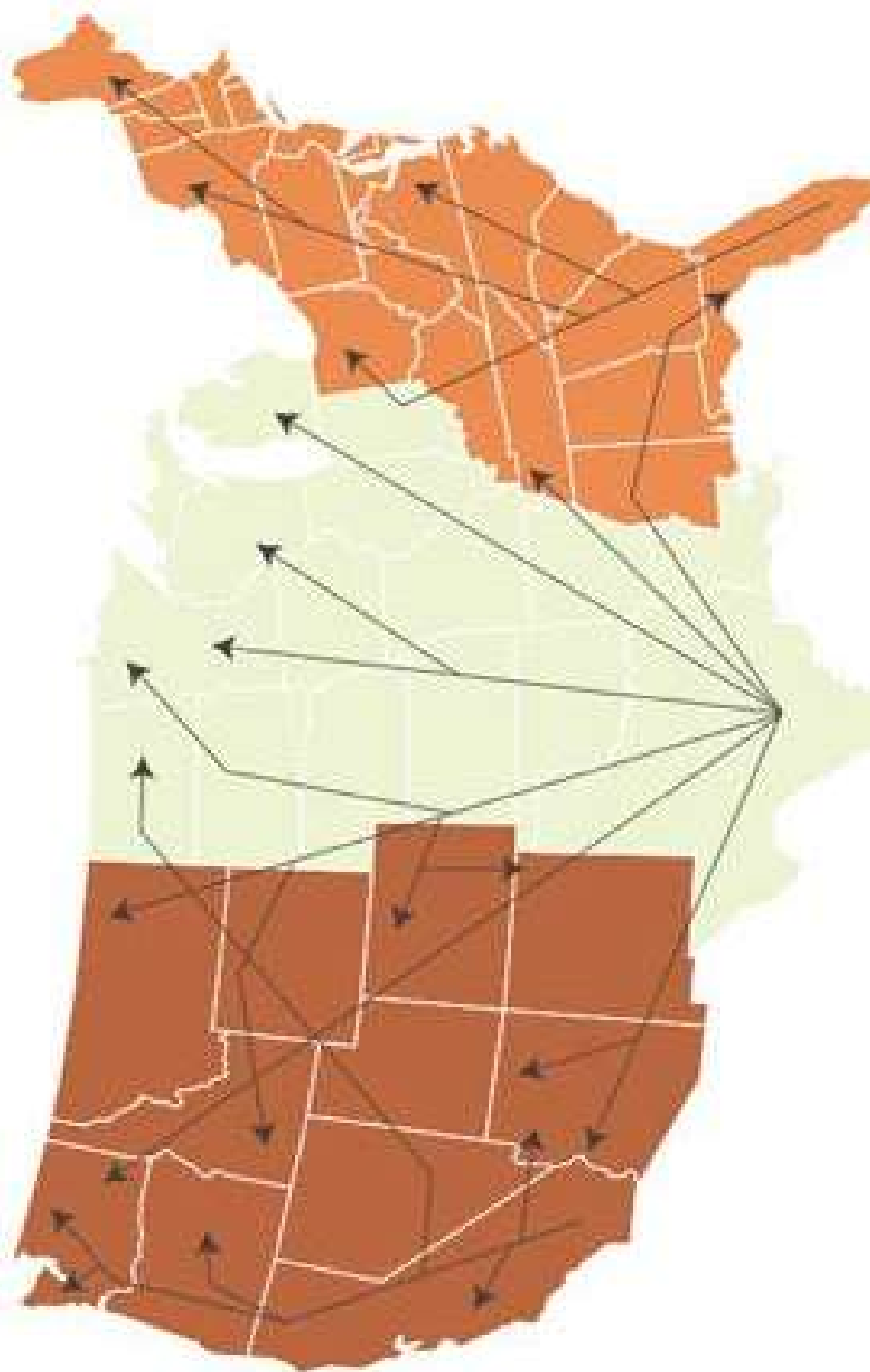
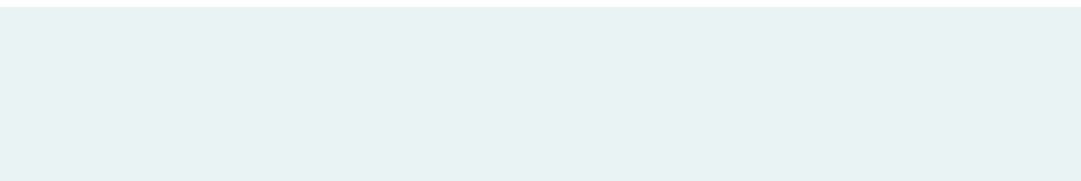


STEREOTYPES V. CULTURAL NORMS

STEREOTYPES	CULTURAL NORMS
No context	In the context of values
Generally negative	Not necessarily negative
Based on assumptions, opinions, misinformation, and limited information	Based on observable behavior and experience within a community
Not helpful	Helpful and intended to guide actions to positive outcomes
“all,” “always,” “never”	“often,” “sometimes,” “may”
Sweeping/simple	Complex/qualifying

Pollinator Lesson





- What is your migration story?
- Are there animals that have cultural significance to your community?



EXAMPLES



RELEVANT

- Using students' names in word problems (math and language arts)
- Connecting kids to their own backyard nature if they are in more urban areas (food systems, water cycle, air, green space)
- Asking "how was that for you?" instead of "wasn't that awesome?" (after a particular activity)
- Making lessons connect to culture (like the Monarch butterfly lesson)



REVITALIZING

- Teaching in students' languages (e.g., Spanish language courses)
- Centering students' cultural ways, needs, etc. on a program (e.g., meals, traditions, and more)

EXAMPLES



NO R'S HERE!

- Pop culture icebreakers
- Asking participants about “parents,” “mom” or “dad”
- Making assumptions about where the students live
- Making assumptions about holidays (like Thanksgiving and Christmas)
- “Alice” algae and “Fred” fungus took a “lichen” to each other

CULTURAL RESPONSIBILITY

curriculum or program mitigates biases (e.g., stereotypes, obsolescence, imbalance, etc.) and consistently present multiple perspectives



4 QUADRANTS OF CURRICULUM BIAS

Erasure & Marginalization	Stereotypes, Appropriation, & Unreality
Imbalance, Obsolescence & Selectivity	Language & Image Bias

Erasure & Marginalization

**Stereotypes, Appropriation, &
Unreality**

**Imbalance, Obsolescence &
Selectivity**

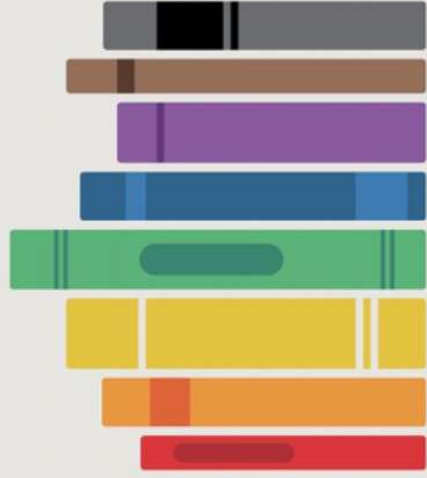
**Language &
Image Bias**

Guiding Questions

- ☐ Who are the heroes?
- ☐ Who are the tokens (e.g., “ten great women conservationists”)?
- ☐ Who isn’t represented? (e.g., women, POC)?
- ☐ Who is in the side bars, and who is in the main text?
- ☐ How are place names references (Western or Indigenous? Both?)
- ☐ If you teach science, who are the scientists you rely on (Western only?)
- ☐ Are Indigenous people being referenced in the past tense?



MARGINALIZATION



RAINBOW BOOK MONTH™

ALA American Library Association

Erasure & Marginalization

**Stereotypes, Appropriation, &
Unreality**

**Imbalance, Obsolescence &
Selectivity**

**Language &
Image Bias**

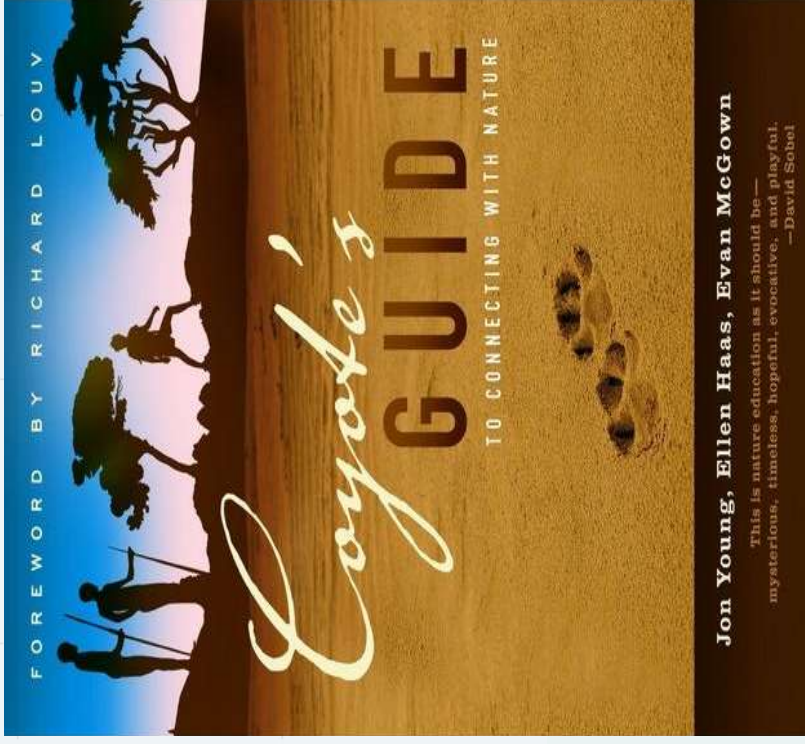
Guiding Questions

- ☐ Is there stereotyping?
- ☐ Is there essentialization?
- ☐ Is there exoticization (e.g., cultures portrayed through food, folklore, fables, festivals, heroes, and holidays)?
- ☐ Are communities of people caricatured (e.g., with cartoon images)?
- ☐ Is there cultural appropriation?
- ☐ Are there statements that are false and unreal (e.g., “our wilderness is pristine and untrammelled”)?

STEREOTYPES



APPROPRIATION



UNREALITY

"We set aside wilderness areas to protect them for what they are — wild places, untrammelled, as much as possible, by man, a reminder of what this country was like before Columbus set foot on this side of the Atlantic. There aren't many of these places left, and we should leave them alone. They are our heritage, and the heritage of future generations."

- Doug Scott



4 QUADRANTS OF CURRICULUM BIAS

Erasure & Marginalization	Stereotypes, Appropriation, & Unreality
Imbalance, Obsolescence & Selectivity	Language & Image Bias

Guiding Questions

- ☐ Is there a one-sided story (e.g., John Muir is a hero)?
- ☐ Are there statements that reflect judgment and/or opinion and not facts?
- ☐ What assumptions does the author make, and are they true?
- ☐ What's the author/illustrator/photographer's culture or identity?
- ☐ When was it published?

Jen Halladay: Multiculturalism in the Modern World (TEDx)



Reconsidering this scene

This 1860 encounter between Dutch and Lenape leaders was intended to celebrate the Dutch founders of "Old New York." But the scene offers only stereotypical representations and ignores how complex and violent colonization was for Native people.

European ships, Native canoes

European ships, Native canoes
The scene depicts a Dutch ship, the *De Wapen*, and a Native canoe, the *De Wapen*. The Dutch ship is a three-masted sailing ship, and the Native canoe is a small, open boat. The scene is set in a harbor, with a stone wall and a windmill in the background.

Women in the background

Women in the background
The scene depicts a Dutch woman, the *De Wapen*, and a Native woman, the *De Wapen*. The Dutch woman is a three-masted sailing ship, and the Native woman is a small, open boat. The scene is set in a harbor, with a stone wall and a windmill in the background.

Who's missing?

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Clothing

Clothing
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From New York Times:

<https://www.nytimes.com/2019/03/20/arts/design/natural-history-museum-diorama.html>

Reconsidering this scene

This 1660 encounter between Dutch and Lenape leaders was intended to celebrate the Dutch founders of "Old New York." But the scene offers only stereotypical representations and ignores how complex and violent colonization was for Native people.

European ships, Native canoes

The numerous ships shown here communicate a sense of European power and wealth. Native people made European goods available to the Dutch, laying the foundation for colonial markets—much further inland.

Women in the background

These Lenape women are shown as "old leaders" who, we know, held leadership roles in knowledge and power. They are depicted in physical labor—and they would not have been dressed this way. In reality, women in Lenape society, both in the past and today, Mananochqua was active in treaty negotiations during the mid-1600s.



Women in the background

These Lenape women are shown as subservient and only engaged in physical labor—and they would not have been dressed this way. In reality, women in Lenape society, both in the past and today,

hold leadership roles, are knowledge keepers and help maintain cultural continuity. The female sachem (leader) Mamanuchqua was active in treaty negotiations during the mid-1600s.



Erasure & Marginalization

**Stereotypes, Appropriation, &
Unreality**

**Imbalance, Obsolescence &
Selectivity**

**Language &
Image Bias**

Guiding Questions

- ☐ Is there exclusionary language (e.g., “noble Indians”, “pristine” wilderness, “grit”?)
- ☐ Who is portrayed in the images, and who is not?

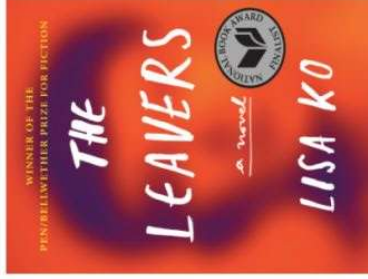
LANGUAGE BIAS

I. NATIVE NATIONS AND THE JURISPRUDENCE OF “DISCOVERY”: INDIGENOUS PEOPLES AND NINETEENTH CENTURY SCIENCE

Commentators often mischaracterize the interests of Native Americans as being in opposition to those of scientists.⁸ It is more

Excerpt: Indigenous Peoples and Epistemic Injustice: Science, Ethics, and Human Rights Rebecca Tsosie, 2012

LANGUAGE BIAS



The leavers



Author: Lisa Ko

One morning, Deming Guo's mother, an undocumented Chinese immigrant named Polly, goes to her job at the nail salon and never comes home. With his mother gone, eleven-year-old Deming is left with no one to care for him. He is eventually adopted by two...

Children of noncitizens

Deportation

Mothers and sons

Noncitizens

Self-actualization (Psychology)

Undocumented immigration

Formats Available Now:

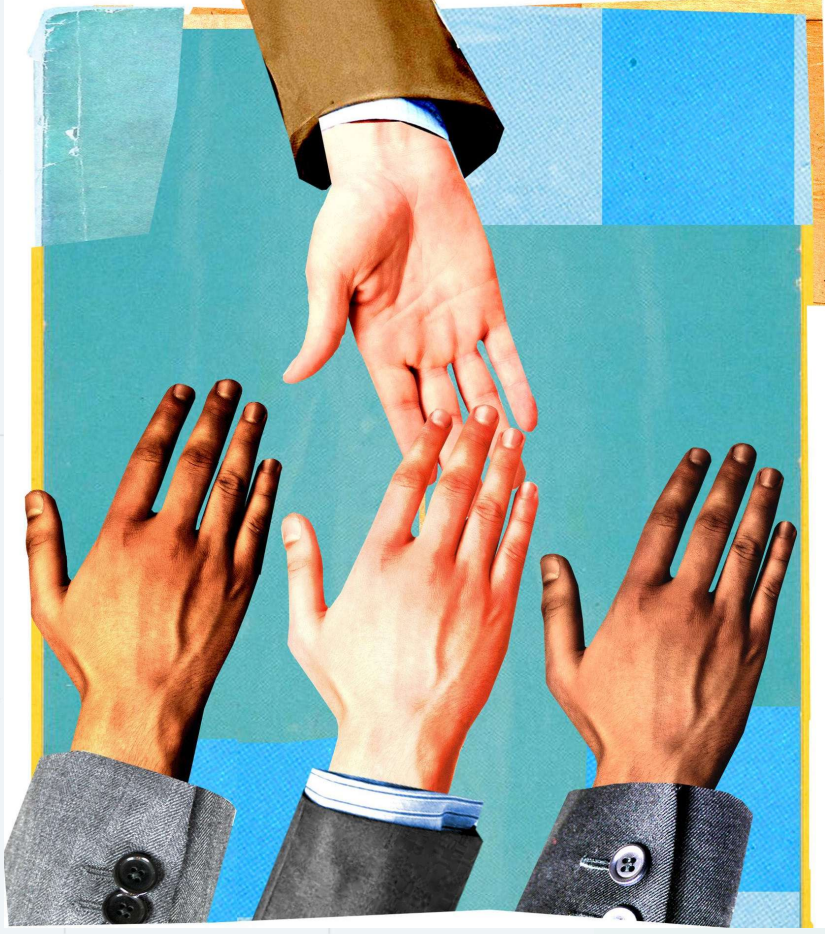
 [Book - 2017](#)

 [eBook - 2017](#)

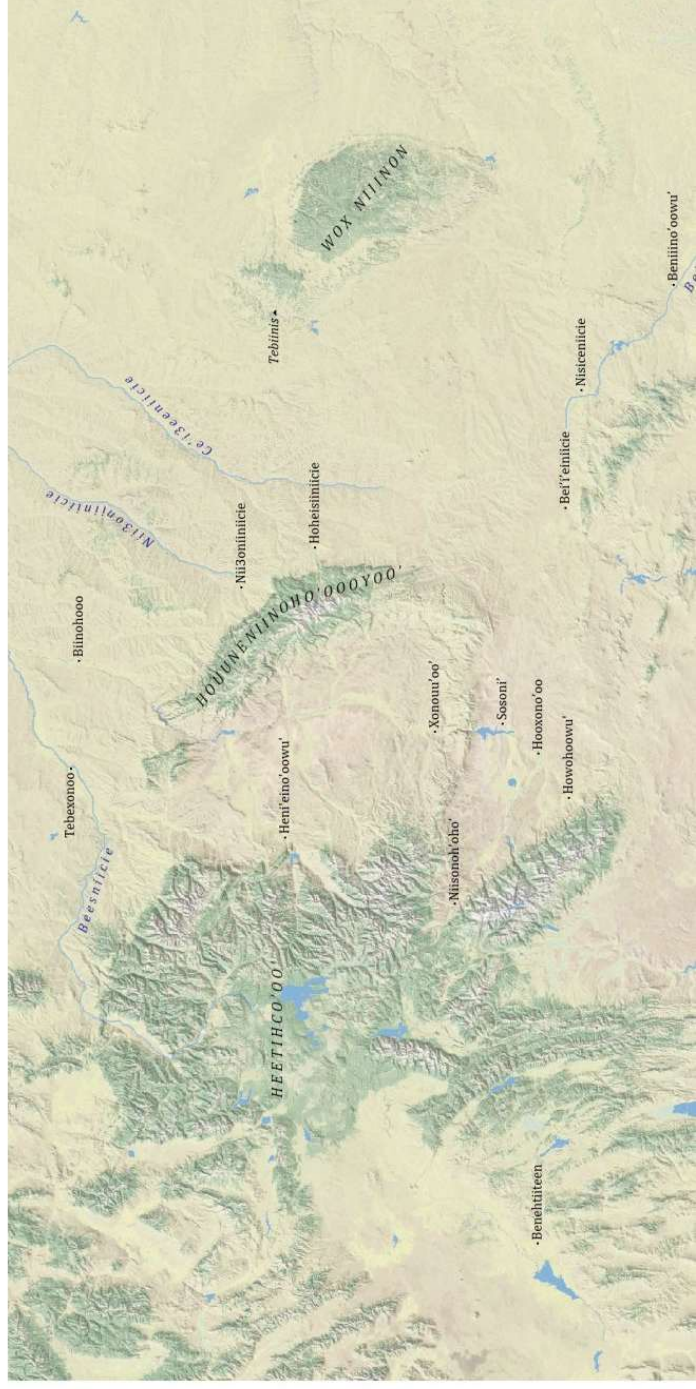
Formats with a Wait List:

 [eAudiobook - 2017](#)

IMAGE BIAS



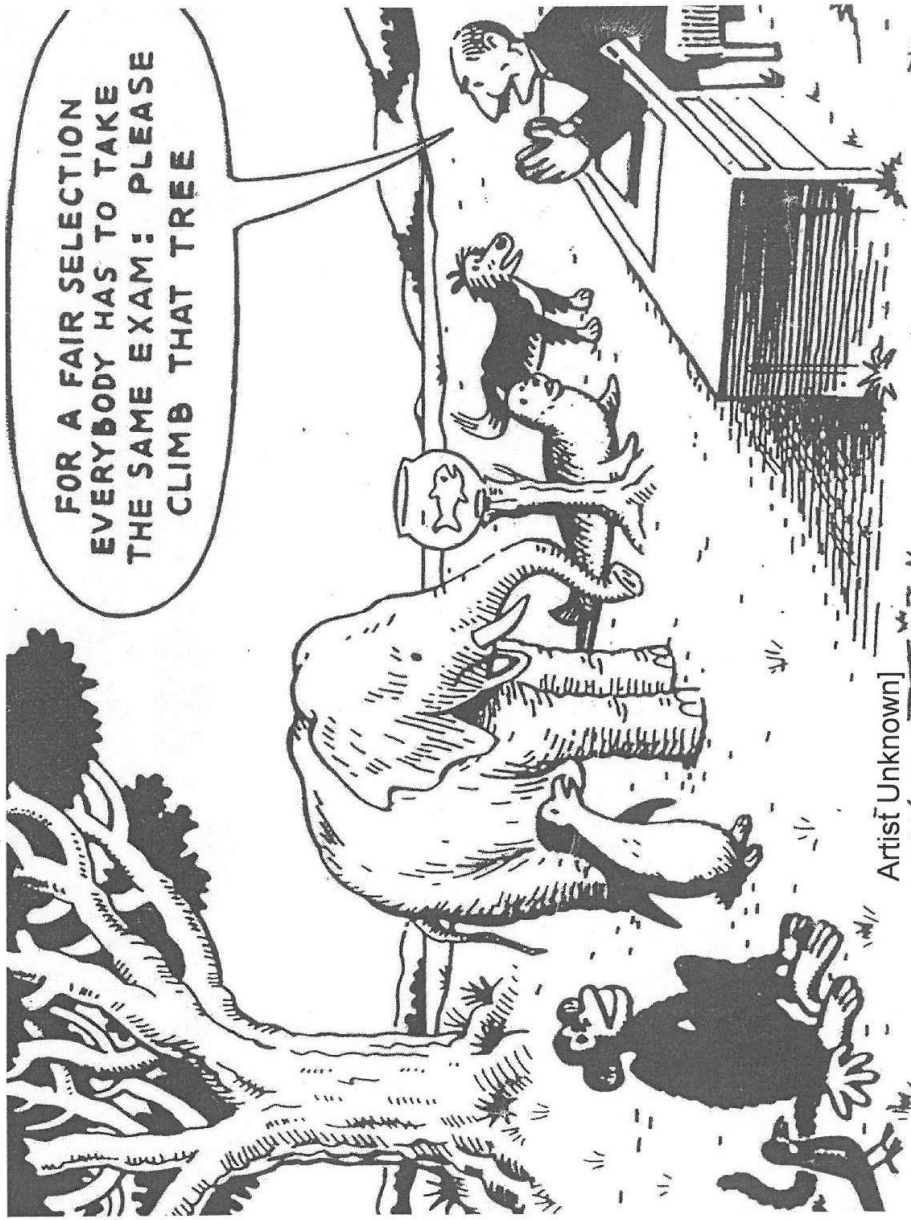
The Rockies: An Arapaho Perspective



CULTURALLY RESPONSIVE

curriculum or program employs instructional methods that reach all learners (e.g., inquiry based, project-based, community learning)





Part III

Small Group Reflections

Take 5 mins to **independently reflect on the following**:

- **Pick one project/program/event** that you are working on or will be working on this year
- **Consider the questions outlined for your breakout discussion** and be prepared to discuss them with your small group

In your breakout, **discuss the following questions**:

- What aspect(s) of your project/program is **already in alignment with the 4 R's** model?
- What areas of the 4 R's have you **not yet considered**?
- What **barriers** exist to addressing these gap areas?
- **What resources do you need** to adequately address all 4 R's?