

Ancestral Science Podcast

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Episode 15

"Mathematics is Creation, Being, and Medicine" with Dr. Edward Doolittle
(Mohawk (Kanyen'kehake), Six Nations)

SHOWNOTES:

Mohawk Mathematician Dr. Edward Doolittle, Kanyen'kehake from Six Nations, taught us about mathematics as medicine, the difference between global/Indigenous/and Western mathematics, how there are many ways to learn and understand math, connections between mathematics and the Creation Story, and the importance of bringing emotion and spirit back into mathematics.

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What is science to you?

-it is a misused and misunderstood term because it is associated with scientific, standardized methods.

-mathematics existed BEFORE proof

Applied Epistemology, a different term to describe relational mathematics instead of "science.

-connects science to us as humans

-this is not positivism, not objectivism

-this is the way we understand the world

-science is about ourselves

Indigenous Math Science: Ind local to human, land, and community. The essence of teachings are often similar, but are explained, taught and passed on through different traditions, customs, and languages.

Global Math/Science: then Global is universal and with standard methods and culture removed, can be taught the same anywhere in the world. "Western" mathematics is a misunderstood term, and reinforces the *mysteries* of the East and *rationality* of the West; this term can *other*.

Alan Bishop: six *universal* activities which can be described as mathematical
COUNTING, LOCATING, MEASURING, DESIGNING, PLAYING, EXPLAINING

https://www.csus.edu/indiv/o/oreyd/acp.htm_files/abishop.htm

There are other ways to do mathematics that are based in relationships and connection!

Tom Porter (Sakokwenionkwas): “Can we be thankful for mathematics?”

- where does math fit within creation? We begin with creation.
 - numbers structure in oral traditions, helps order memory aids.
- <https://vimeo.com/807132979>

“Math as Medicine” by E. Doolittle

https://indigenoumathematics.weebly.com/uploads/2/0/4/5/20451709/medicine_-_doolittle.pdf

- Indigenous mathematics and Global mathematics is the same, it is about understanding the world and ourselves and humans but from different perspectives
- how can mathematics contribute to wellness?

Haudenosaunee Thanksgiving Address:

https://americanindian.si.edu/environment/pdf/01_02_Thanksgiving_Address.pdf

- remembering the water, fish, trees, where is mathematics?

Numbers led is back home

- mathematics is first, it is ours, from the first moment of Creation
- like the waves on the shore, which give us the drum beat.
- math is being, creation, medicine

Math & Residential Schools

- very little was taught in residential schools, but everything that was taught was for a reason.
 - English/French: taught to suppress Indigenous languages and passed on knowledge
 - Religion: taught to suppress spirituality
 - farmwork/servant: to suppress economic growth, and be a good follower
 - math: what was this to suppress?
- “math was how they really got us!” (residential school survivor): taught intentionally, possibly to reinforce the epistemology of *one answer* thereby increasing control and decreasing critical thinking.
- how do we stop the cycle of harm done by teaching math in this way?

Four Directions of Math

- Mental- this is often how mathematics is defined, segregated in the head.
- physical- manipulatives, construct mathematical knowledge
- emotional- this is how to make math better
 - group work increases positive feelings towards the subject
 - positive feelings can be connected to math
- spiritual-this is often suppressed

- religion & warfare (in Europe)
- aha moments, intuitions, transcendent experience of coming to know

Ramanujan: Math & Spirituality: <https://scienceandnonduality.com/article/the-secrets-of-ramanujans-garden/>

Upcoming Projects & links:

- Math Bundle Project- June 2025
- Tipis and Wind Tunnels- TBD 2025
- <https://indigenoumathematicians.org/edward-doolittle/>
- <https://www.fnuniv.ca/academic/faculty/dr-edward-doolittle/>

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