

STGWG STEM UPDATE

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Responding to NETWG White Paper Priorities in STEM Education

- Nuclear Energy Education → ANS/Discovery Education--
[“Navigating Nuclear”](#)
- Integration of place-based Traditional Ecological Knowledge (TEK) with DOE mission-focused STEM--
<https://csdt.rpi.edu/culture/legacy/na/loom/index.html>
- Career Opportunities for Native Americans/Workforce Needs for DOE-- [Supporting STEM Education in tribal communities project team](#)
- Incorporation of strategy for tracking data from programs—
[Federal STEM Plan Interagency groups](#)

Federal Alignment: Federal STEM Strategic Plan (2018-2023)

❖ Goals of Plan

- STEM-literate society
- STEM workforce of future
- Promote diversity and inclusion in STEM

❖ DOE Implementation Strategy



DOE Implementation strategy

Providing DOE-specific committed objectives for implementation of the STEM strategy, assessing and scaling our work for sustainability

◆ **Objective 1: Foster STEM Ecosystems**

Action 1: Establish additional connections between Federal STEM professionals and Federal facilities and local and regional STEM ecosystems to provide additional opportunities for mentorship, educator professional development, curriculum material development, and other community engagement activities.

◆ **Objective 8: Digital Platforms:**

Action 3: Identify and prioritize support for practices and learning models for distance learning that most effectively reach underserved and rural populations.

"Supporting STEM Education in Tribal Communities" Project Team NE staff and NETWG Tribal member co-lead a project team that is exploring the need to integrate STEM education into formal and informal learning for Indigenous students.

Implementation strategy proposal

- **Objective 5: Making Math a Magnet:**

- Action 2:* Prioritize support for programs and partnerships that integrate mathematics and statistics education in meaningful and applied contexts, including for educator upskilling.

- **Objective 5: Making Math a Magnet:**

- Action 3:* Identify and share mathematics and statistics education practices shown to retain diverse learners.

- **Objective 6: Transdisciplinary Learning:**

- Action 3:* Ensure that Federal activities in support of the recruitment, preparation, retention, and upskilling of STEM educators incorporate or reflect transdisciplinary approaches featuring teaching that focuses on local and global community questions.

- **Objective 7: Computational Thinking:**

- Action 3:* Identify and share education practices and curriculum materials that are effective at developing computational thinking.

Navigating Nuclear: Energizing Our World Navigating Nuclear provides educators with the tools to dig deeper into the role of nuclear science, nuclear technology, and the mathematics that supports the science and engineering of the field. In addition, culturally-relevant curriculum will enable learners to engage with mathematics in a pertinent way. Resources include standards-aligned STEM project starters, digital lesson plans, nuclear industry career profiles, virtual field trips and culturally-responsive problem-based mathematics lessons.

Tribal STEM Ad Hoc Committee

- The need for this ad hoc committee grew out of an expressed interest from all three DOE Tribal Working Groups to increase STEM opportunities for youth and the workforce in Indian Country. This committee will be focused on improving access to STEM education and workforce development opportunities, while increasing site-specific tribal engagement. This collaborative effort will allow tribal working group members to identify and evaluate best practices to determine methods that suit individual tribal needs.
- Inaugural meeting April 23 : virtual meeting with members from all three working groups NETWG, STGWWG, and ICEIWWG. **Next meeting: May 24**
- Group discussed framework for standing up this group including organizational structure, mission statement, and individual expectations

Millennial Nuclear Caucus



Overview: The Millennial Nuclear Caucuses are a series of events that bring together the next generation of leaders in nuclear innovation.

- They feature discussions on the path forward for the nuclear industry and the role innovative technology will play.
- Participants at the events represent the full spectrum of the nuclear field, including young leaders supporting the existing fleet, those designing small modular and advanced reactors, and those advocating for a thriving nuclear future.
- Possibility of hosting at Tribal College or University

<https://www.energy.gov/ne/initiatives/millennial-nuclear-caucus>

Office of Environmental Management Newsletter

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EM's Oak Ridge Site has decommissioned and demolished some of the largest nuclear facilities in the world. Now, employees there are helping train the next generation entering the nuclear field through a new University of Tennessee minor degree.

Office of Nuclear Energy Newsletter

Sign-Up here: <https://www.energy.gov/ne/information-resources/office-nuclear-energy-newsletter>

- Advanced Nuclear Matching game: <https://www.energy.gov/ne/maps/advanced-nuclear-matching-game>



- Nuclear Reactor swipe right and Match Game

<https://www.energy.gov/ne/articles/swipe-right-nuclear-6-eligible-advanced-Technologies>



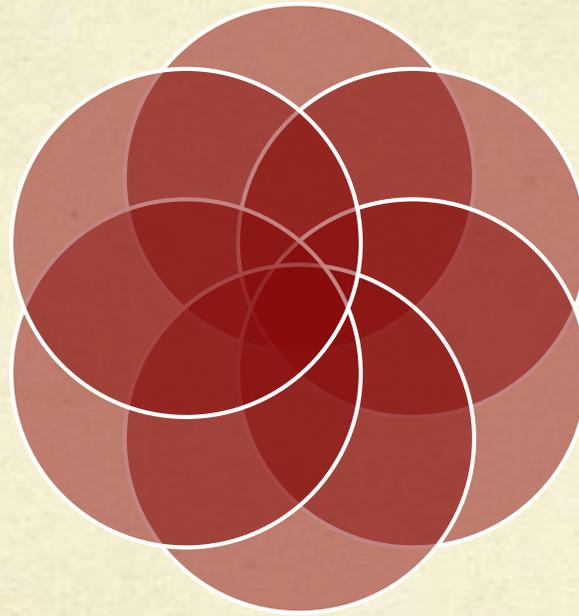
STEM
Workforce

Accountability

Increase
Diversity

Including
TEK-base

STEM
Literacy



Nuclear Energy
Education