

# A Reflection Tool for STEM Programs

sySTEMnow - November 1, 2023

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Slides: [tinyurl.com/wi-stem-tool](https://tinyurl.com/wi-stem-tool)



**What is your vision for STEM education?  
Introduce yourself and share with a neighbor(s).**

**“All students use a collaborative, innovative, and logic-based transdisciplinary approach, rooted in content knowledge, skills, and experiences, to identify and solve contemporary problems.”**

# Objectives for Our Conversation

- Review DPI's STEM Self-Reflection Tool
- Profile of Lincoln STEM Elementary, Watertown
- Collaboratively use and discuss the reflection tool
- Q&A

# DPI STEM Self-Reflection Tool

## How do you reflect on (evaluate) your STEM program?

- What information is most important?
- How does it inform progress toward your vision?



# DPI STEM Self-Reflection Tool

DPI staff created a tool and vetted it with a range of district teams, teachers, and administrators.

- It's not about "evaluation" but conversation.
- It's flexible - only looking at aspects important for you.
- It's a progression, focused on evidence.
- It centers support for educators and students, alongside partnerships.



## Innovation for Engaged Learning: STEM Education Self-Reflection Tool

At the Wisconsin Department of Public Instruction, we embrace a vision that every child graduates from high school ready for college, career, and community. Within that broad umbrella of work, we realize all students must be prepared to address complex societal challenges that require a unique skill set encompassed within Science, Technology, Engineering, and Mathematics (STEM) education. Therefore, we have developed a more specific vision for STEM education:

**"All students use a collaborative, innovative, and logic-based transdisciplinary approach, rooted in content knowledge, skills, and experiences, to identify and solve contemporary problems."**

It is critical to note that this vision statement is for all students. Regardless of life paths chosen, all people of our world need to be "STEM literate" - to be able to apply their fundamental content knowledge and skills to collaboratively and creatively solve problems.

### Reflect

As your local-level team reflects on STEM education programs within your school and/or district, first reflect on and discuss the following questions (which align with the four review categories in the tool below):

- 1. Strategic Planning:**
  - What is your vision for STEM learning?
    - What specific goals have you established to reach that vision?
    - How are or how will you evaluate progress on those goals?
    - Who is involved in the work, both internally and externally?
- 2. STEM is for All:**
  - How are underrepresented students being engaged in STEM?
  - Do training and materials address varying students needs and equity considerations?
- 3. Collaborative and Transdisciplinary:**
  - What training has been provided to educators?
    - How is collaboration structured?
    - What instructional materials and equipment are available to support learning?
    - How are programs integrating STEM subjects in a "transdisciplinary" way that brings out key areas of each subject to be coherent and relevant?
- 4. Real-World Learning with Partnerships:**
  - How is learning rooted in real-world contexts with authentic partnerships?

For further information on state-wide STEM education work or for questions, please visit <http://stem.dpi.wi.gov> or email [stem@dpi.wi.gov](mailto:stem@dpi.wi.gov).



### Plan and Act

The Department of Public Instruction recommends the following elements of a self-evaluation process for a team using this tool:

- As seen in the first review category below of strategic planning, schools/district should first collaboratively establish a vision, goals, and evaluation plan for their work to ensure programmatic coherence and progress. This reflection tool and the ideas in the categories below can support a local strategic planning process for STEM.
- Teams should collaboratively gather evidence in relation to their STEM work. Evidence could include course offerings, course enrollments broken down by gender and ethnicity, unit and lesson plans, authentic assessment examples and...

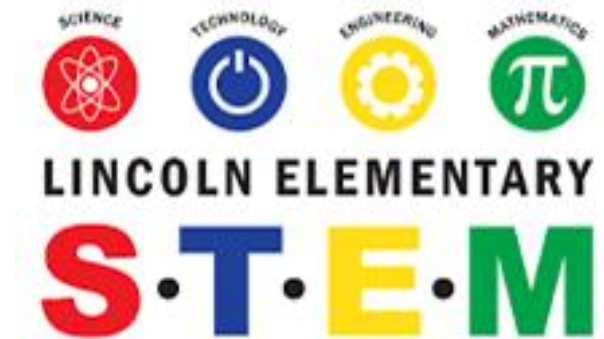
# Lincoln STEM Elementary - Watertown

- Share story and current work
- Share evaluation work, highlighting use and usefulness of DPI STEM tool



# Lincoln STEM Elementary - Watertown

- Administrator perspective - leading STEM



# Digging into the Tool

Let's dig into the [STEM Reflection Tool](#)

- Move into small groups (no more than 3-4)
- Share and reflect on your work (if relevant) in relation to section 3 of the tool.
  - Or share stories of what you've seen elsewhere.
- Skim and discuss other sections as time allows



# Share Thoughts on the Tool

- How did use of the tool go?
  - What did you notice? What did you wonder?
  - What resonated with you?
  - Any new conversations prompted?
  - How might you use it?

# Questions/Comments?

Any questions in relation to:

- STEM work at Lincoln STEM Elementary?
- The DPI STEM reflection tool?
- Using this tool at your location and/or getting help in using it?

# Questions/Comments?

We're happy to discuss ideas further!

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