

Sustainable & Innovative STEM for K-5 Teaching & Learning



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Quick! Grab some post-its

Take a moment to jot down whatever comes to mind when you think about

K-5 STEM Teacher Leaders

What characteristics come to mind?

What kinds of things do these folks tend to do inside and outside the classroom?

Are you thinking of someone you know? If yes, how would you describe that person?



How does this definition change when we add the words sustainable and innovative? What about inclusive?

Grab some more post-its to add any new words that come to mind.

A TEACHER-LEADER...

- ❑ has an identity as a teacher and as a leader.
- ❑ is seen as such by others in their school community.
- ❑ uses their knowledge of effective practice, and of the educational system, not only to empower others but also bring about improvements that lead to better teaching and learning across classrooms, schools, and systems.
- ❑ brings cross-sector partnerships together to better enable real world STEM learning.

TEACHER-LEADERS' ACTIONS CAN BE CHARACTERIZED BY THEIR...

- ❑ deep engagement and “getting their hands dirty” in the midst of teaching and learning.
- ❑ advocacy inside and outside the classroom.
- ❑ collaborative approach to problem-solving.
- ❑ viewpoint that children are stakeholders in their own learning.

TEACHER-LEADERS ARE SISTEM TEACHER LEADERS WHEN THEY...

- ❑ embrace “failures” as learning opportunities using a growth mindset.
- ❑ approach learning with a creative problem-solving perspective.
- ❑ demonstrate practices that include all learners in STEM activities.
- ❑ provide opportunities for students to experience STEM in authentic real-world contexts.



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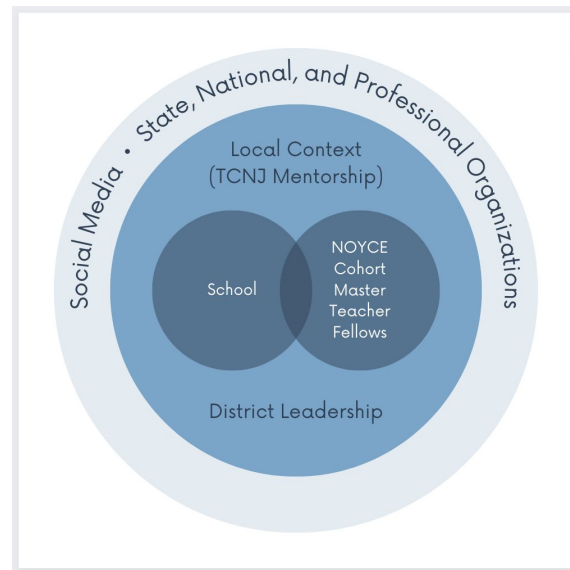
How we defined SISTEM Teacher Leadership



We will recruit a total of 24 Master Teacher Fellows (MTFs) across two cohorts. **Cohort 1 will begin in the summer 2025 semester.**

SISTEM MTFs will work with their cohorts for a total of **five years.**

Over the course of the five year period they will deepen their content and pedagogical knowledge, gain leadership skills, and serve as resources within their schools and communities.



Timeline for MTFs

Year 1: complete the [graduate certificate](#) in Environmental Sustainability Education

Year 2: work closely with education leadership faculty and mentor teacher leaders to develop a teacher-leadership skill set

Year 3: mentor future teachers through hosting student teachers and giving guest lectures in methods courses on our campus

Years 4 & 5: design a personalized vision for SISTEM teacher leadership



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Where are we now?

- We just recruited our first cohort of 18 Master Teacher Fellows!
- Starting on May 5th we'll begin, and we plan to ask these folks to define K-5 STEM Teacher Leadership for themselves
- We'll also do some activities to get these folks thinking about who is included when we think about STEM learning, and what STEM learning looks like in K-5 spaces
- We'll also engage in some data analysis categorizing these goals and envisioning what the future of this cohort will be like

Thank you!



- Visit the project site for application and project updates:
<https://sistem.tcnj.edu>
- Please email me at maddenL@tcnj.edu with any questions.

