Coaching to Amplify Students' Mathematical Thinking

Latrenda Knighten
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President-Elect (2023-2024), NCTM
@LatrendaK
Lknighten@nctm.org

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Professionalism

"In an excellent mathematics program, educators hold themselves and their colleagues accountable for the mathematical success of every student and for personal and collective professional growth toward effective teaching and learning of mathematics."

NCTM *Principles to Actions*, 2014

Collaboration

- “Research indicates that not only more growth in mathematics achievement in students whose teachers regularly collaborate than in students whose teachers work in isolation, but also a reduction in traditional learning gaps among disaggregated groups (Moller et all. 2013.)”

- To build a culture of professionalism, and to promote mathematical success for all students, we must embrace collaboration as a norm for mathematics educators.

To Amplify Students' Mathematical Thinking and Foster Collaboration

❑ Facilitate and Engage in Purposeful Collaborative Planning with Colleagues

- Provide teachers with dedicated time to collaborate with colleagues on planning math instruction. Encourage them to share ideas, brainstorm lesson activities, and develop strategies for promoting mathematical thinking among students. This includes:
  - Helping teachers create student-centered learning environments that provide engaging activities that encourage curiosity, exploration, problem-solving, and foster a deep understanding of mathematics.
  - Helping teachers implement instructional strategies that amplify student thinking and promote student discourse such as: problem-based learning, inquiry-based learning, and tasks that promote reasoning & problem solving
- Facilitate vertical planning sessions.

To Amplify Students' Mathematical Thinking and Foster Collaboration

❑ **Establish Professional Learning Communities**

- Establish PLCs focused on mathematics instruction where teachers can collaborate, share resources, and discuss effective teaching practices.
- Provide support and facilitation to help PLCs set goals, plan meetings, and implement action plans.
- Establish site-based and/or district-based communities of practice.

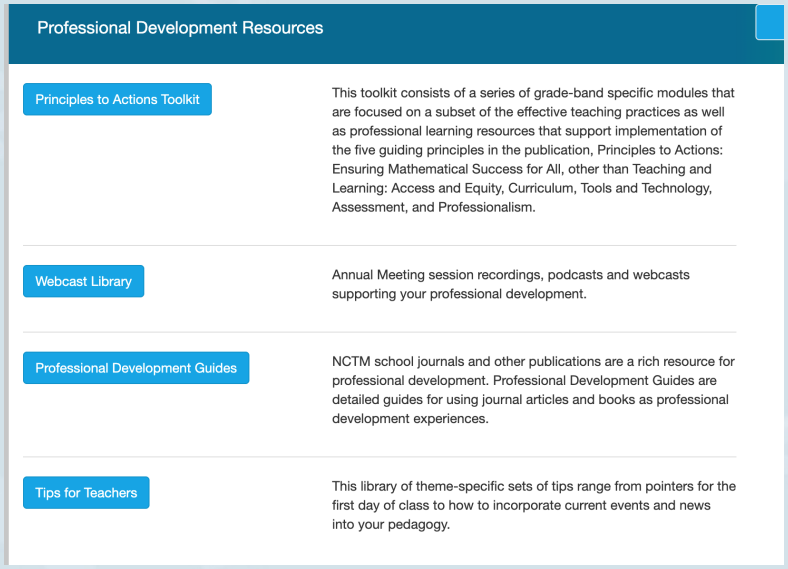
❑ **Peer Observation and Feedback**

- Facilitate opportunities for teachers to observe colleagues' math lessons, provide constructive feedback, and reflect on their own teaching.

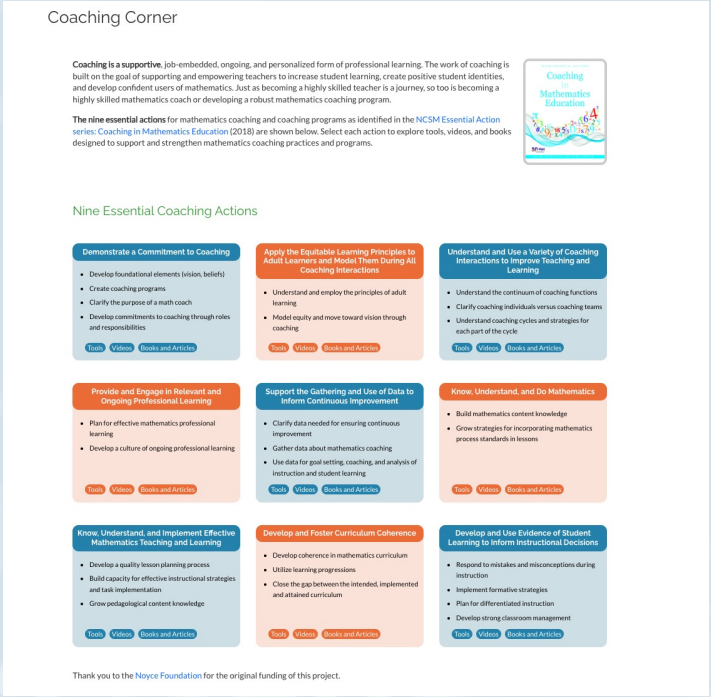
To Amplify Students' Mathematical Thinking and Foster Collaboration

- **Provide teachers with resources, strategies, and professional development opportunities.**

- [NCTM Professional Development Resources]



- [NCSM Coaching Corner]



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To Amplify Students' Mathematical Thinking and Foster Collaboration

- ❑ **Foster a culture of continuous professional growth by providing ongoing support and opportunities for teachers to expand their knowledge and skills in mathematics instruction.**
  - Encourage participation in professional organizations
    - Join local, state, or national mathematics educator organizations
    - Attend professional conferences
    - Attend networking activities (discussion groups, chats, etc.), webinars
    - Read books, journals or other publications
- ❑ **Take advantage of complimentary professional learning opportunities**

Reflection

What area or areas do you want to focus on in your role as a mathematics education leader?

Thank You!

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Latrenda Knighten
LKnighten@nctm.org
@LatrendaK