Modeling Teachers International

Supporting and connecting science educators across the globe

MTI Newsletter, November 2026

Hello Everyone,

Greetings from *Modeling Teachers International* (MTI)! Hope this newsletter finds you well and enjoying a productive fall school season.

Who are we?

MTI is the international affiliate of American Modeling Teachers Association and US 501c3 non-profit organization. Our mission is to create and implement programs that support science teachers and faculty worldwide. Our unique focus is model-based inquiry approaches to science instruction, such as the *Modeling Method of Instruction* (or *Model Didactics*, in the Netherlands) pioneered by Dr. David Hestenes at Arizona State University in the '80s and '90s.

MTI has active members across the globe, including Australia, Canada, Croatia, Egypt, Germany, Hong Kong, Jordan, Lativa, Netherlands, Oman, New Zealand, Saudia Arabia, Slavic Republic, Turkey, and the US.



University of Lativia faculty members and *Modeling Lesson Study* participants enjoy a break together: (upper, from left) Jānis Cīmurs, Linards Goldšteins, Jelena Kosmača, Krišjānis Kalme, and (lower) Antons Cvečkovskis.

You are invited to join our private online groups:

- MTI *Facebook* group
- MTI *LinkedIn* page

You are also invited to join our growing MTI *WhatsApp* group. Email your *WhatsApp* contact information to the MTI: modelingteachersinternational@gmail.com

How do I become an MTI member?

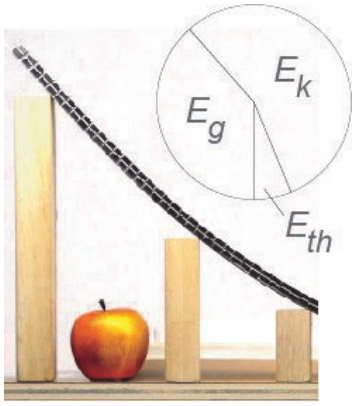
Good news! If you are receiving this newsletter, you are already an MTI member!

Do you have friends or colleagues who might be interested in becoming an MTI member? Forward this newsletter and ask them to reach out to us via email (subject line: MTI membership). If at any time you would like to opt-out of MTI membership and communications, please email us. *MTI membership is absolutely free!*

Online Course on the Modeling Method (Model Didactics), January to April 2027

Want to learn more about the Modeling Method of Instruction (Model Didactics)? Please join us this coming winter for:

Online Advanced Course in Model Didactics: Examples from Mechanics and Magnetism



Instructor: Dr. Mark Lattery, University of Wisconsin Oshkosh
Dates: 4 January to 23 April, 2027.
Registration form (set browser for translation from Dutch)
Course syllabus and schedule (click here)

This 16-week online science-teacher professional development course intorduces the model-based inquiry for the high school and university classroom. We will explore such basic questions:

- What is a scientific model?
- What does scientific modeling look like in the classroom?
- How can I improve student participation and learning?

The course schedule includes: a 1-week preparation, 9 weeks of course content, 4 weeks of classroom application, and a 2-week break.

Sample modeling topics include pre-lab concept maps, inductive laboratories, and whiteboard discussions strategies. Examples are drawn from mechanics (gravitational and spring motions, with a focus on energy concepts) and electromagnetism (magnetic fields and force).

International Journal of Modeling in Science Education

The *International Journal of Modeling in Science Education* (IJMSE) is dedicated to publishing high-quality teaching and education research articles on the use of models and modeling in science education for a broad readership. Below is a sneak peek of our Fall 2026 (Volume 1) issue:

IJMSE

- ☐ Welcome to IJMSE! (Mark Lattery, IJMSE Editor-in-Chief)
- ☐ *Guest Editorial:* Become a Modeler (Colleen McGowan-Romanowicz, AMTA Senior Fellow)
- ☐ Modeling a Slinky's Magnetic Field (Onne Slooten, Netherlands)
- ☐ Adapting Modeling Instruction: A Quasi Experimental Study (Stephan Bourget, Canada)
- ☐ Dialogues in a Modeling Classroom: Elastic Energy (Scott Hertting, US)
- ☐ Student Reactions to Newly Introduced Modeling Instruction (Cathy Baars, Ed van den Berg, and Onne Slooten, Netherlands)
- ☐ Galileo's Law of Chords: A Model Deployment Activity for Mechanics (Mark Lattery, US)
- ☐ *Modeling Reading Corner*: Recent Teaching and Research Articles in Modeling
- ☐ *Watch This:* New Online Videos on Modeling in Teaching

Interested in publishing with IJMSE, but not sure how to proceed? Please send us an email at the MTI to get the conversation started! Several notes:

- Click here for a detailed IJMSE description, including aims, scope, and submission instructions.
- Send all manuscripts to modelingteachersinternational@gmail.com (subject line: IJMSE)
- For the Spring 2026 issue, the manuscript deadline is **March 1, 2027**.

Interested in serving as an IJMSE Editorial Board reviewer? (It looks fantastic on a resume!) If interested, please send a letter of interest and your current resume/vita (PDF) format. No previous experience as a journal article reviewing is required.

Modeling Lesson Study Program (Fall 2026)

This fall, in partnership with the University of Latvia, MTI launched its *Modeling Lesson Study* (MLS) program. An MLS is a short 8-week professional development course for science teachers and university faculty on the development of a model-based inquiry lesson, with the goal of improving existing laboratories, structured classroom discussions, and field experiences.

Four enthusiastic University of Lativia faculty members (see photo and caption on the cover page) are "re-modeling" existing lessons into modeling lessons, guided by Jelena Kosmača (University of Latvia, Associate Professor, Leading Researcher, Group Leader of the Physics Education Group) and Mark Lattery (University of Wisconsin, Professor and MTI President).



Stephanie Lattery (left), Onne Slooten (middle, Netherlands Model Didactics Leader), and Mark Lattery (right), hang out on a sunny day after a recent two-day *Model Didactics* workshop.

Current Research on Modeling in Science Education

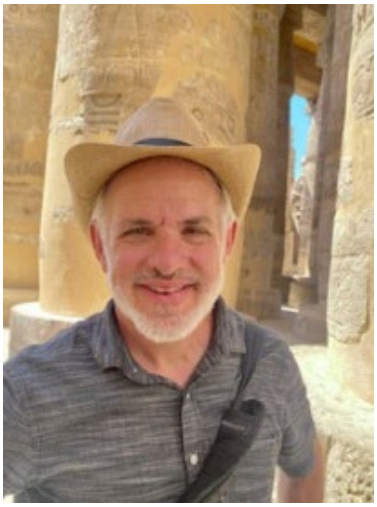
Stoeckel-Rogers, M. & Roehrig, G. (2026). What does it mean to be good at science? *Journal of Research in Science Teaching*, 63 (90).

> Co-authored by former AMTA Executive Board Member and modeling specialist, Marta Stoeckel-Rogers, this article analyzes video of students working small group to give support, ask questions, and share ideas in a modeling classroom.

Udosen, A. & Magana, A. (2026). Model-based reasoning in STEM education: A systematic literature review. *International Journal of STEM Education*, 13 (30).

> This article examines 146 peer-reviewed studies of model-based reasoning in STEM education. Special attention is given to how students construct, use, evaluate, and revise models; and how these activities develop scientific reasoning.

Will you join us as a financial partner?



Modeling Teachers International is a U.S. non-profit 501(c)(3) organization. Your generous donation will help us establish and grow science-teacher modeling communities worldwide!

Note: Donations by US citizens are tax-deductible. All major credit cards are accepted.

For a detailed description of our current needs, please read our Fall 2026 donor letter. If you would like to join us as a financial partner, complete and return the included donor card.

Serving science teachers together,



Mark

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