Support Resources

Presentation homepage

https://jeffandersonmath.wordpress.com/2022/02/10/make-eigenvalues-resonate-simiode-expo-2022/
Let’s co-create this experience

Please find our Google doc.

Respond to “Participant Warm Up” prompt
“Roger Schank has often said, ‘There are only two things wrong with education: what we teach, and how we teach it.’

Getting rid of grades is an important part of fixing the how, but it’s important not to lose sight of the what.”

Book : Ungrading: Why Rating Students Undermines Learning (and What to Do Instead), Edited by Susan Bloom, Chapter 8: Critique-Driven Learning and Assessment by Christopher Riesbeck, pp. 135
The Mathematical Modeling Process

Real-world problem

Mathematization

Ideal mathematical model

Mathematical analysis

Meaningful solution

Critical thinking

Ideal solution

(Prohibitive obstacle)
Eigenvalue Modeling

(Schematic diagram, not to scale)
Data Collection
Model Validation

- Left mass: measured velocity
- Left mass: modeled velocity
I’m working to implement this activity in classrooms that feature the following design choices:

- Flipped learning
- Active learning on applied projects
- Collaborative work in small groups
- Ungrading processes
- Heavy focus on meta-learning
- Weekly one-on-one conferences with me (the teacher)