An **Energetic** Approach to Teaching

Joshua R. Wickman

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Outside the Classroom

• PhD student in Physics and Astronomy
• Research in particle theory and cosmology (thesis advisor: Qaisar Shafi)
Inside the Classroom

• 11th grade Integrated Science
  – Working with Tim Brewer, Jessica Jackson, and Dana Boltuch
Inside the Classroom

- My job: resource in the classroom
Why Focus on Energy?

- Astronomy
  - Stellar fusion
  - EM spectrum
- Ecology
  - Alternative energy
  - Energy hierarchy between trophic levels
- Underlying principle
Launching Point – $E=mc^2$ Book

- Different perspective
- Cross-curricular approach
  - English
  - History
  - Literacy
- Demystifies Einstein’s work
Follow-Up – Hands-On Exploration

- Energy stations
  - Many different forms of energy transfers
- Guided inquiry
Results and Conclusion

• Outcome
  – Better grasp of energy
  – Ties many concepts together

• Challenges
  – Covering all required topics in a timely fashion
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