What was *THAT* Again?
The Role of Discrepant Events in Identifying Student Misconceptions in STEM

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Agenda

• Setting the Scene
• Introductions and Pre-Survey
• Definitions
• Demonstrations and Design Challenges
• Conclusions and Post-survey
• Questions and Comments
Constructivism

• Philosophy of education and learning
• We construct our own understanding of the world we live in
• People generate their own “rules” and “mental models,” which are used to make sense of our experiences
• Learning is the process of adjusting mental models to accommodate new experiences
• Learning is affected by context as well as beliefs and attitudes

Davison (2006)
Prince and Felder (2006)
Inductive Methods

- Inquiry
  - Structured
  - Guided
  - Open
- Problem-based
- Project-based
- Case-based
- Discovery
- Just in Time

Prince and Felder (2006)
Partner to Reinforce

• Parents
• Before/After School Care
• Educational Bridges
• Summer Activities
Questions / Comments?

Thank you!
References
