Magic Moments:
Active Problem Solving with Young Children

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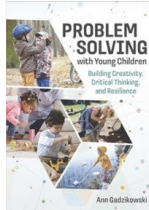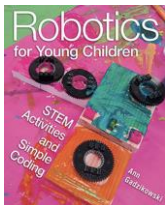
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About me...

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My books...

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Session Agenda

Part 1: The best problems
Part 2: A problem-solving framework
Part 3: A community of problem solvers

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What are your most memorable mistakes?

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Poll: Making Mistakes

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"As educators, we must think of problems as
an unlimited natural resource
generated inside our own classrooms."

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What problems happen in your classroom?

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Types of problems

- **Accidents --** Spills, bumps, and crashes
- **Social --** "You can't play with me!"
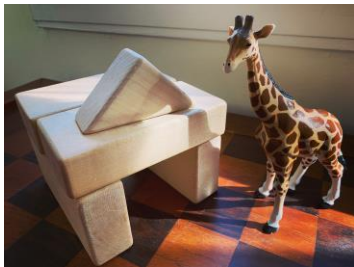- **STEM --** Engineering challenges

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Accidents

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Social

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STEM

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Part 2: A Problem-Solving Framework

1. The framework
2. Questions to ask, things to say

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A Problem-Solving Framework

1. **Is everyone safe?**
2. **What's happening?**
3. **What can we try?**
4. **How did it go?**

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Poll: How would you respond?

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A Problem-Solving Framework

1. **Is everyone safe?**
2. **What's happening?**
3. **What can we try?**
4. **How did it go?**

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Questions to ask, things to say

- "It sounds like it's time to solve a problem."
- "Let's talk about what's happening."
- "Tell me what you're thinking."
- "I'm wondering what's going on."
- "I'm here."
- "I'm listening."
- "I'm ready to help you solve this problem."

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Poll: How might you respond?

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A Problem-Solving Framework

1. **Is everyone safe?**
2. **What's happening?**
3. **What can we try?**
4. **How did it go?**

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Poll: How would you respond?

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A Problem-Solving Framework

1. **Is everyone safe?**
2. **What's happening?**
3. **What can we try?**
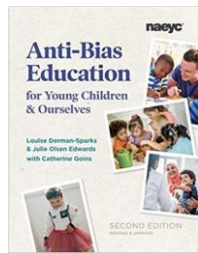4. **How did it go?**

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Part 3: A community of problem solvers

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Looking at problems with an **Anti-Bias** lens...

- Societal attitudes about gender and problem solving
- Cultural contexts
- Consider differing abilities

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Poll: Are you good at math?

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Carol Dweck's research on girls and math

$$\zeta(s) = \sum_{n=1}^{\infty} \frac{1}{n^s}$$

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Consider cultural contexts

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Consider non-verbal approaches
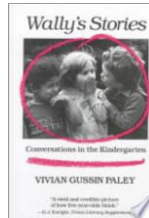to problem solving

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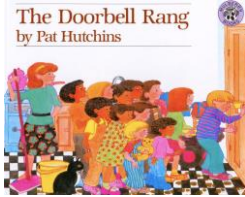Create wonderful problems to solve

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Vivian Paley's big bag of sand

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Problem-Solving During Story Time

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Other great picture books...

- *If You Give a Mouse a Cookie* by Laura Numeroff
- *A Chair for My Mother* by Vera B. WIlliams
- *Brave Irene* by William Steig
- *Can I Play Too?* by Mo Willems
- *Frog and Toad Are Friends* by Arnold Lobel
- *Milo Imagines the World* by Matt de la Peña

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Problem-Solving During Group Time

Role play problems with dolls, puppets, and people.

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Young Children and Climate Change

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UNICEF's climate and environmental
sustainability strategy includes:

- Make children a focus of environmental strategies
- Empower children as agents of change

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How to empower young children?

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Creative problem solving play that focuses on:

- Water
- Engineering
- Weather
- Outdoor habitats (and nurturing a love of nature)
- Compassion and caring for the Earth and each other

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In closing...

"We are all problem solvers."

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Contact Information

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