KCM Favorites

Thinking Together-
9 Beliefs for Building a Mathematical Community

Rozlyn Dance and Tessa Kaplan
Welcome!

Your host

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About the Authors

https://www.heinemann.com/products/e09818.aspx
KCM Favorite

by Rozlyn Dance and Tessa Kaplan

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Effective Mathematics Teaching Practices
1. Establish mathematics goals to focus learning.
2. Implement tasks that promote reasoning and problem solving.
3. Use and connect mathematical representations.
4. Facilitate meaningful mathematical discourse.
5. Pose purposeful questions.
6. Build procedural fluency from conceptual understanding.
7. Support productive struggle in learning mathematics.
8. Elicit and use evidence of student thinking.
KCM Favorite

**Building Mathematical Community**

1. Everyone has the right to learn.
2. We respect the ideas of others.
3. Challenging problems help our brains to grow stronger.
4. Mistakes are great. (If we learn from them)
5. Good mathematicians are brave and try new things.
6. There are different strategies for solving a problem.
7. It’s not about the answer.
8. Good learners ask questions.
9. Questions from the teacher help us to learn and grow.
Why I Love This Book
A Respectful Community of Learners

1. Everyone has the right to learn.

2. We respect the ideas of others.

Posters available as a free download at the publisher’s site.

https://downloads.heinemann.com/thinking-together-posters
A Respectful Community of Learners

“When a respectful atmosphere exists in the classroom, students feel more comfortable sharing their mathematical thinking with one another, taking risks, and tackling new ideas.”

A Respectful Community of Learners

Using read alouds to help teach respect.

[Book images: Chrysanthemum, Miss Nelson is Missing!, How Full is Your Bucket?, The Invisible Boy, Hooway for Wodney, Yoko]
Everyone has a right to learn

Teaching moves and routines that support a student’s right to learn:

• Private Think Time
• “Don’t steal my thinking”
• Turn and Talks
• How to Help a Partner
• Revoicing/Retelling
• Honoring All Students’ Thinking
• Revising Thinking
We respect the ideas of others

“As teachers, we model respectful behavior with our tone of voice, our consideration for everyone, and most importantly our celebration of differences with our classroom.”

Authors Dance and Kaplan
We respect the ideas of others

Respecting each other:
• Respectful listening
• Respectful disagreements
• Explaining disagreements
• Honoring mistakes
• Modeling
• Praise
• Public Records
• Sentence Stems
We respect the ideas of others

Sentence Stems

• I respectfully disagree because…
• I solved the problem differently because…
• I like how you _____ because_____
• I’m having trouble understanding you ___. Could you explain it in a different way?
We respect the ideas of others

How do you develop classroom culture where...

1. Everyone has the right to learn.

2. We respect the ideas of others.
Building Brave Mathematicians

3. Challenging problems help our brains grow stronger.

4. Mistakes are great!

5. Good mathematicians are brave and try new things.
Building Brave Mathematicians

Using read alouds to encourage confidence, perseverance, and resilience.
Building Brave Mathematicians

Using read alouds to encourage confidence, perseverance and resilience.

“WHAT DO YOU DO WITH A PROBLEM?”

“SNOWFLAKE BENTLEY”

“FANTASTIC ELASTIC BRAIN”

“MY STRONG MIND”

“I Can’t Do That, YET”

“The Hugging Tree”
Building Brave Mathematicians

Using read alouds to encourage confidence, perseverance and resilience.

https://www.youtube.com/watch?v=2fZjMYdQjGM
Building Brave Mathematicians

KCM challenge for you…

Incorporate more read alouds into your classroom to enhance the mathematical culture.
When students exclaim, “That’s easy!” “We must remind them that we all learn at different paces and in different ways and just because the problem is easy for one doesn’t mean it is easy for all.”

Authors Dance and Kaplan
Building Brave Mathematicians

Mathematical Confidence

• Perseverance
• Valuing Mistakes
• Taking Risks
• Self-Reliance

What does this look like in the classroom? Paint a picture of mathematical confidence.
Great Minds Think Differently

There are different strategies for solving a problem.

It’s not just about the answer.
Great Minds Think Differently

Great Minds Think Differently

Be careful with praise.

“I really like the way you showed the way you used the cubes on your paper.”

“I like how you worked hard to write the sentences that clearly explain the steps you took when you used your doubles strategy.”

“This picture shows me exactly what you did to solve the problem.”
Good learners ask questions.

Questions from the teacher help us learn and grow.
Thinking Through Questioning

Teachers questions generally fit into 3 categories

• Questions that clarify and probe for justification
• Questions that guide, challenge, and extend
• Questions that assess understanding
Thinking Through Questioning

Questions that clarify and probe for justification-

“How did using a ___ (model) help you solve the problem?”

“What tool did you use? How did it help you?”

“What in the problem told you that?”
Thinking Through Questioning

Questions that **guide, challenge and extend**-

“I saw you use a number line yesterday. Would that tool help you today? Why? Why not?”

“Do you think one strategy is more efficient that another in this problem? Explain.”

“Can you create a similar problem that I can give to the class?”
Thinking Through Questioning

Questions that assess understanding:

“Why did you use this operation?”

“I saw that some of our classmates had ____ as their answer. What do you think they did to get that answer?”

“What does the number ____ represent in the problem? Explain your thinking.”
Thinking Through Questioning

NOTICE

WONDER
Thinking Through Questioning

Teacher Talk Moves to Encourage Questioning

• Does anyone have questions for ________?
• What questions can you ask _______ to help yourself better understand (his/her) thinking?
• Can you tell me more about ___?
Great Minds Think Differently

Using read alouds to encourage thinking differently.
KCM Favorite

Building Mathematical Community

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Which belief is most important to you?
Type in chat box or unmute mic and share with our friends.

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Beliefs for Building a Mathematical Community

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APRIL 20 - 24
2:00-2:30 PM EST

Monday, April 20 - Thinking Together- 9 Beliefs for Building a Mathematical Community

Tuesday, April 21 - Routines for Reasoning: Fostering the Mathematical Practices in All Students

Wednesday, April 22 - Developing Number Knowledge

Thursday, April 23 - Math Fact Fluency

Friday, April 24 - Taking Action Implementing Effective Mathematics Teaching Practices Grades 9-12
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KCM is here to support you!

Contact me

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