Mathematics and Special Education Leadership **Protocols**

Developed in collaboration with the MA DESE, the MA Math Support Specialists' Network and Education Development Center, Inc.

Massachusetts Department of
ELEMENTARY & SECONDARY
EDUCATION

EDC Learning transforms lives.

Acknowledging the Team

- *Who's here?*
- *What is each person's role?*
- *What does each person hope to bring to this team's work?*

Overview of the Protocols

- Take a few minutes to read or review pages 1-3 of the Prologue document.
- This important information provides context for the protocols.

Premise of the protocols

By focusing on students with disabilities when planning math instruction, educators will be better able to address the needs of all learners.

Connections to Massachusetts Tiered System of Supports (MTSS)

The protocols…

- ★ Build collaboration and leadership
- ★ Promote an understanding of both mathematics and the variability of learners, including students with disabilities
- ★ Model rigorous core instruction in mathematics (Tier 1) using multiple accessibility strategies

Mathematics and Special Education Leadership Protocols

Protocol 1: *Shared Beliefs About Mathematics Instruction for Students with Disabilities*

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Today's Work with the Protocols

- **1: Shared Beliefs About Mathematics Instruction for Students with Disabilities**
- 2: Essential Understandings About Students with Disabilities
- 3: Essential Understandings About Rigorous Mathematics Instruction
- 4: Aligning Barriers and Strategies
- 5: *Responding to a Range of Learning Needs*

Protocol 1 Goals

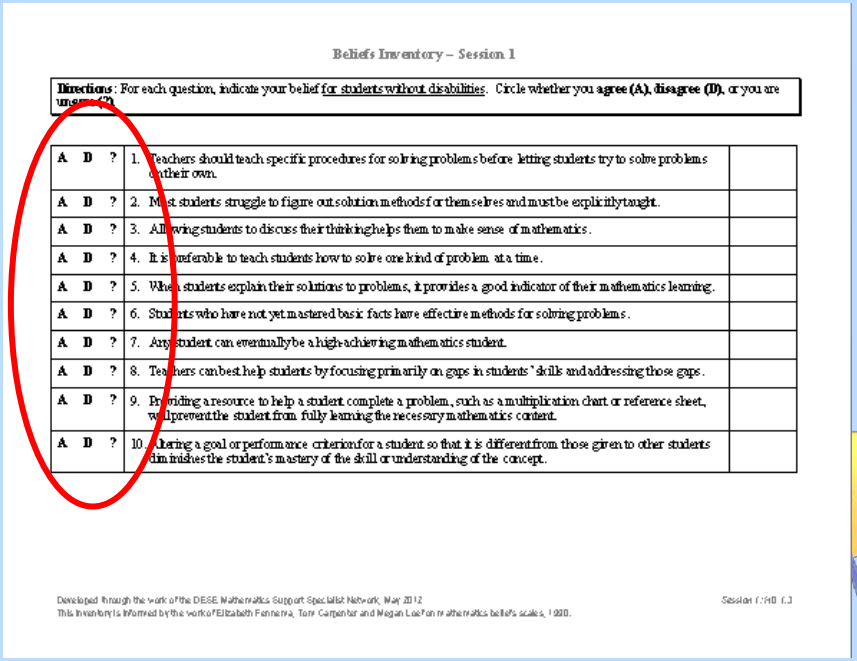
- To identify both the team's shared and differing beliefs about math instruction for students with disabilities;
- To use those areas of shared beliefs and differences to fuel discussion within the team that leads to greater understanding and agreement among the team about expectations in mathematics instruction for students with disabilities.

Agenda

- Getting started
- Complete the Beliefs Inventory
- Tally and discuss results
- Individual reflect-and-write
- Next steps

The Beliefs Inventory

- Think about a classroom of students
- For each statement, circle either:
  - **A** (Agree)
  - **D** (Disagree)
  - **?** (Not sure)



Beliefs Inventory – Session 1

Directions: For each question, indicate your belief for students without disabilities. Circle whether you **agree (A), disagree (D)**, or you are unsure (?).

A	D	?	1. Teachers should teach specific procedures for solving problems before letting students try to solve problems on their own.	
A	D	?	2. Most students struggle to figure out solution methods for themselves and must be explicitly taught.	
A	D	?	3. Allowing students to discuss their thinking helps them to make sense of mathematics.	
A	D	?	4. It is preferable to teach students how to solve one kind of problem at a time.	
A	D	?	5. When students explain their solutions to problems, it provides a good indicator of their mathematics learning.	
A	D	?	6. Students who have not yet mastered basic facts have effective methods for solving problems.	
A	D	?	7. Any student can eventually be a high-achieving mathematics student.	
A	D	?	8. Teachers can best help students by focusing primarily on gaps in students' skills and addressing those gaps.	
A	D	?	9. Providing a resource to help a student complete a problem, such as a multiplication chart or reference sheet, will prevent the student from fully learning the necessary mathematics content.	
A	D	?	10. Altering a goal or performance criterion for a student so that it is different from those given to other students diminishes the student's mastery of the skill or understanding of the concept.	

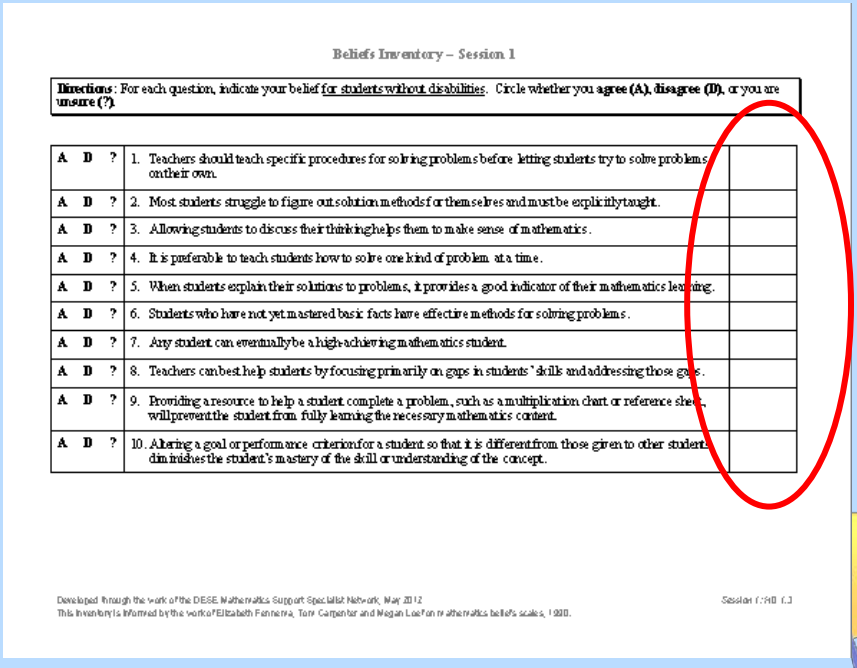
Developed through the work of the DESE Mathematics Support Specialist Network, May 2012
This inventory is informed by the work of Elizabeth Fennema, Tom Carpenter and Megan Loef on mathematics beliefs scales, 1989.

Session 1: Pg. 1 of 1

The Beliefs Inventory

- Re-read each question, thinking specifically about ***students with disabilities***

- Write **A**, **D** or **?** in the right-hand column.



Beliefs Inventory – Session 1

Directions: For each question, indicate your belief for students without disabilities. Circle whether you **agree (A)**, **disagree (D)**, or you are **unsure (?)**.

A D ?	1. Teachers should teach specific procedures for solving problems before letting students try to solve problems on their own.	
A D ?	2. Most students struggle to figure out solution methods for themselves and must be explicitly taught.	
A D ?	3. Allowing students to discuss their thinking helps them to make sense of mathematics.	
A D ?	4. It is preferable to teach students how to solve one kind of problem at a time.	
A D ?	5. When students explain their solutions to problems, it provides a good indicator of their mathematics learning.	
A D ?	6. Students who have not yet mastered basic facts have effective methods for solving problems.	
A D ?	7. Any student can eventually be a high-achieving mathematics student.	
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Session 1 (AM) (...)

The Beliefs Inventory

- *Which beliefs appear to be mostly shared?*
- *What are the points of disagreement?*
- *Are there any surprises?*
- *What are the underlying assumptions behind our points of disagreement?*
- *Do we have different beliefs for students with and without disabilities? If so, why? How can we reconcile our differences?*

Write and Reflect

What are some important ideas from today that you want to note for yourself?

Wrap-Up

- Summarize and list any outstanding questions that have not been answered yet and that are still under discussion.
- Review any parking lot questions
- Any “To-Do” items for next meeting
- Review the purpose of next meeting.
- Clarify date, time and location of next meeting.

Next Time…

- #1 *Shared Beliefs About Math Instruction for Students with Disabilities*
- #2 *Essential Understandings About Students with Disabilities*
- #3 *Essential Understandings About Rigorous Mathematics Instruction*
- #4 *Aligning Barriers and Strategies*
- #5 *Responding to a Range of Learning Needs*