Talking Points for Protocol 2 PowerPoint Slides

For use by the Protocol 2 facilitator

Note: Not all slides have talking points provided.

Slide	Talking Points
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5	**Be sure to read the directions to participants:** *Solve the following basic facts.* ***You have 1 minute*** *to complete this quiz.* *Please remember to tell the group that the + symbol means multiply, the - symbol means divide, the ÷ symbol means add, and the x symbol means subtract.*
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7	We're going to look at 6 areas of demands and difficulties for students with disabilities. These 6 areas were chosen because of their impact on students' mathematics learning. While this list is not exhaustive, it is nevertheless an important set of difficulties to consider.
8	Memory in mathematics is crucial but often misunderstood. Give the following analogy: Think of memory as a filing cabinet. A person may have information that is **stored** in the wrong drawer or may have the information stored in the right drawer, but in the wrong folder. **Retrieval** may be very difficult when stored incorrectly. Students may have had the correct input, but cannot retrieve the information, such as math facts. Math facts are an example of where students may have input, but cannot retrieve the information quickly or accurately. Short-term memory can be another area of difficulty. With multiple step problems, students may not be able to hold on to the prior steps that will help them to complete the problem.
9	Attention can appear in different ways: lack of focus or hyper focus (can focus but only on one step, such as a multiple step problem where the student is on step 1 and teacher is on step 3.)

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	Too much text or too many problems on a page can be overwhelming to a student with an attention issue.
10	Organization is more than losing a pencil. Learning mathematics requires many different organizational skills; for example, when doing computation, ordering numbers is paramount to successfully completing calculations.
11	Language can be divided into receptive language (listening and reading) and expressive language (writing and speaking).
12	Conceptual Understanding deals with issues of making connections in mathematics between big ideas; for example: How does this pattern of numbers relate to a symbolic or algebraic notation? What does area really mean? Students who don't have conceptual knowledge often cannot transfer skills to new problem situations.
13	For some students, visual representations alone may not be helpful, and concrete materials may be more valuable.
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18	Today's protocol focused on six areas of demand and difficulty that are particularly relevant to mathematics instruction, and on using the IEP as a tool to inform mathematics instruction. The next protocol will shift from a focus on special education to a focus on mathematics in preparation for weaving the two together in Protocols 4 & 5. The next protocol will delve into the Standards or Mathematical Practice that are a key part of defining what "rigorous mathematics for all students" looks like in the new MA Math Frameworks.