Quick Reference Guide for Students with Asperger's Syndrome (AS) In a Mathematics Classroom

General Manifestations of AS	Presentation in Mathematics Classroom	Effective Teaching Strategies
	Communicative Manifestations	
Struggles with interactive questioning	Difficulty with social atmosphere	Use exaggerated non-verbal cues to add meaning to questions - *gives clues to help students understand meaning*
	Sense of humor lags that of peers	Verbal and non-verbal cues - *amused expressions, or laughing - subtlety is not helpful*
	Obsessed with extraneous facts	Use unambiguous Language - *focus on required context*
		Circle words, peer discussion - *draw attention to extraneous facts & clarify prior to discussing problem*
	Words with multiple meanings (plane/plain/(air)plane, sine/sign)	Circle words, peer discussion - *draw attention to dual meaning words & clarify prior to discussing problem*
Difficulty understanding directions	Difficulty following verbal instructions	Provide written directions to the student prior to the verbal explanation - *give student time to process the information*
	Comprehension of written instructions	Student recitation of directions in own words - *aids translation*
Comprehension of vocabulary	Word problem comprehension	Graphic Organizers, manipulatives - *to aid translation - key word strategies do not work for students with AS because of the ambiguity of words*
	Parsing multistep problems	Step-by-step guides - *break down the problem in sections to clarify focus*
		Break into multiple single step problems - *class discussion, peer coaching to pre-determine game plan for individual problem*
	Social Manifestations	
Inability to work with others	Inability to work with a partner	Selective Pairing - *students willing to work with the student and peers with whom the student is willing to work*
	Difficulty due to anxiety	Pre-assigned pairings - *pre-knowledge of pairing allows adjustment time*
	Inability to work in a small group	Assign roles to students in group - *a set of expectations for how they should act in the group and what to expect from their peers*
Perspective taking	Accepting & understanding peer perspective	Role play exercises & peer coaching - *helping students to understand varying views and understand/accept tolerance*
Violates social norms	Proximity violations of other students	Role play exercises & peer coaching - *helping develop personal boundaries*
Emotional delays	Outbursts	Give extra breaks - *allows quiet personal time to process feelings and anxieties prior to joining class activities*
Distractive behaviors	Improper manipulative use	Explain rules for use, in a graphic organizer for some students - *reinforcing rules consistently helps anchor good behavior*
	Physical Manifestations	
Sensory threshold - lights or noise	Noise of group work	Provide extra breaks, work in hall, quiet corner - *provides personal space*
		Provide headphones – *reduces background noise, playing soothing music outside of group work increases focus*
		Chat with student - *provides an emotional break from work*
	Overly-bright room	Provide a more dimly lit setting
Emotional threshold	Overstimulation	Provide breaks or conversation - *as above*
		Provide student choice - *provides control over environment,* alleviating feelings of helplessness and anxiety
Dexterity issues	Poor handwriting	Provide note taking guides - *limits the amount the student must write*
		Provide peer writer during group work - *purposeful assignment of group roles relieves stress from student*
Balance, Gait Issues	Group activities of a physical nature	Provide alternative group role - *relieves anxiety of falling, increases safety*

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	Cognitive Manifestations	
Unusual/ Intense area of interest	Lack of focus or effort if interest is not mathematics related	Inclusion of interest through word problems and project choices - *allows student to become the class expert, giving value to his/her contributions*
Memory recall	Cannot recall mathematics facts	Calculator permitted - *places focus on interpretation / analysis*
Demonstrating knowledge	Limited or missing explanations and work shown	Provide a reduced set of problems - *showing more details on fewer problems relieves stress due to slower work pace*
		Break the question into a set of questions so each step is seen as an answer - *allows for repeated 'closure'*
		Fill-in-the-blank solutions - *gives student opportunity to see solution expectations and show more details where needed*
		Provide a checklist - *relieves stress of knowing how much work to show*
Abstract reasoning	Unable to make connections	Provide visualization through spatial models or manipulatives - *increases connection to physical world*
		Place problems in real world setting of when or how the mathematics concept could be used
	Cannot translate knowledge into new contexts	Provide graphic organizers, manipulatives - *provides connections so that extension to new scenarios can occur*
Organizational thought	Jumbled solution work	Fill-in-the-blank solutions - *places focus on thought process and analysis instead of worrying about missing steps*
	Trouble completing work	Reduced Problem Set - *showing more details on fewer problems relieves stress due to slower work pace*
	Limited sequential problem solving	Step-by-step instructions or checklist - *increases focus on analysis*
	Difficulty navigating classroom routines	Provide color coded notebooks or peer collaboration - *focus on retraining habits*
Attention span	Mathematical focus is lacking	Incorporate the student's interests, in general - *make connections wherever possible*
		Differentiate instructions to individual student - *provides motivation*
		Provide student choice for projects - *allows student to choose relative to own interest*
		Provide extra time on tests/quizzes - *relieves stress of workload, maintains focus*
	Unmotivated	Positive reinforcement, reward systems, teacher proximity - *maintains student engagement*
	Refusal to do assigned work	Behavior charts - *consistently reinforces good behavior*