

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

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