CONTENTS

Acknowledgments About the Authors x	xxi xxi xiii
About the Authors x	xiii
	1
I lumping on Doord, What Is the Mathematics	1
Jumping on Board: What Is the Mathematics Whole School Agreement?	
What Is the Mathematics Whole School Agreement?	2
Why Students Need a Cohesive Approach to Instruction	4
How Does an MWSA Provide a Solution?	4
An MWSA Is an Agreement Among All Stakeholders	5
An MWSA Helps Students Make Sense of the Content	5
An MWSA Helps Teachers Align Their Teaching With	
Standards and Assessments	6
Committing to Equitable and High-Quality Mathematics	
Instruction	11
Equitable Instruction	11
High-Quality Mathematics Instruction	12
Prioritizing the Development of Deep Mathematical	40
Understanding	13
The MWSA Process	14 17
Putting It All Together! Next Steps	17
Next Steps	17
Watching What We Say! Using Correct and	
Consistent Language	18
Introduction to Mathematical Language	19
Commonly Used Words That Expire in Middle School	21
Introducing Vocabulary	28
Avoiding Messy, Misaligned, and Sometimes Meaningless	
Mnemonics	30
Communicating These Changes in Mathematical Language	
to Others	34
Putting It All Together!	37
Next Steps	37

MP_MS_Bush_SAGE.indb 13 04/09/20 3:27 PM

Symbol Sense Is Foundational: Noting the Importance of Precise Notation	38
Why the Use of Precise Notation Can Be Challenging	39
Critical Notation to Be Learned in the Middle Grades	39
Equal Sign	40
Greater Than and Less Than Signs	42
Commonly Used Notation in Middle School That Needs	
Attention	42
Putting It All Together!	45
Next Steps	45
Mental Images That Last: Cohesive and	
Consistent Representations	46
What Are Representations?	47
Representations: Concrete, Semiconcrete, and Abstract	48
Selecting Aligned and Consistent Representations	50
Concrete Representations	50
Semiconcrete and Abstract Representations	53
Commonly Used Representations in Middle School	58
Sharing With Stakeholders	66
Putting It All Together!	68
Next Steps	68
Why Was I Taught That? Evaluating	
Rules That Expire	69
What Are RTEs?	70
Examples of RTEs	71
Negative Impacts of Teaching RTEs	75
Commonly Used <i>RTEs</i> in the Middle Grades	77
Putting It All Together!	92
Next Steps	92
Building Generalizations: Developing	
Instructional Strategies the MWSA Way	93
Generalizations Versus Rules	94
Generalizations to Last a Lifetime	96
Common Overgeneralizations Made by	
Middle School Students	98
Instructional Strategies for Supporting Students in	
Developing Generalizations	101
Tasks to Promote Generalizations	101
Putting It All Together!	109
Next Steps	110

MP_MS_Bush_SAGE.indb 14 04/09/20 3:27 PM

Embodying the MWSA in Every Lesson:	
No Teaching by Telling!	111
Getting Ready to Implement an MWSA in Instruction Making Teacher Lesson- and Unit-Planning	112
Time Nonnegotiable	113
Using Appropriate and Vetted Resources	114
Embodying Your Team's MWSA in Instructional	
Lessons and Units	118
Language and Notation	120
Representations	122
Rules That Expire	126
Generalizations	130
Putting It All Together!	132 134
Next Steps	134
Getting to the Heart of the Matter:	
Building and Enacting the MWSA	135
Enacting Change	136
Collaborative Teamwork	136
Planning for Change as a Team	136
Moving MWSA Beyond Your School	142
Establishing a Horizontally Articulated MWSA	143
Establishing a Vertically Articulated MWSA	146
Ensuring That All Stakeholders Are Involved	149
Putting It All Together!	150
Next Steps	150
Sharing Successes From the Field: MWSA	
Heroes Tell Their Stories	151
Examples of MM/SAs in Action	152
Examples of MWSAs in Action A Mathematics Coach Takes the Lead: Helping Change Direction	
One Educator Spearheads an MWSA in His School	156
A Department Chair Coordinates a Process: Supporting Studer	
Learning	159
Next Steps: You're Ready for Action—Consider	
Change Often	161
-	4/0
References	162
Index	171



Visit the companion website at resources.corwin.com/mathpact-middleschool for downloadable resources.

MP_MS_Bush_SAGE.indb 15 04/09/20 3:27 PM