2008 Mathematics K-8 Core/Comprehensive Instructional Materials Review

- Reviewer Comments –

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Office of Superintendent of Public Instruction
Old Capitol Building
PO Box 47200
Olympia, WA 98504-7200

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1 Introduction

This document contains the unedited reviewer comments from the K-8 Mathematics Instructional Materials review completed in June 2008. The document is organized alphabetically by program, then by grade level.

The comments are sometimes very detailed—describing a specific performance expectation, and are sometimes a broad statement about the entire program. Each comment is the professional opinion of an individual reviewer. Only light editing was performed to clarify or correct grammar and spelling.

This document is meant to be an ancillary companion to the 2008 Mathematics Instructional Materials K-8 Core/Comprehensive Review Report. It is not intended to be read as a rigorous review of the submitted programs.

2 Reviewer Comments

2.1 Aleks Math – Grades 6-8

Grade	Reviewer Comments
6	• This program requires computer access for all students every day. • Highly dependent of teacher use of computer to generate reports as well as individual instruction. • Students would need to be self motivators and self managers.
6	• 6.1.E: There is no explanation of why the decimal points are moved right or left just that the students do it. • 6.2.E: Explanations of the 3 properties was helpful, but there appeared to be no application and/or higher order usage of them beyond recognition.
6	• Great supplement. • Difficult organization. • No "Table of Contents" or logical sequence.
7	• 7.1.B: "Ignore the sign", "change subtraction to addition" are not how algorithms or concepts should be explained to students. • This program appears to be more appropriate for students who have learned and understand concepts and algorithms to practice what they've learned. Doesn't appear to be a curriculum one would use solely in a classroom, but rather as an aide to help low students or those who needed additional drill and kill practice.
7	Not a standalone curriculum; however one of the best supplements I have come across.
6/7	• Initial assessment was 40 questions, not 15-25 as stated. After initial assessment I was not able to access the modules in a way that I could see the content I wanted. After several attempts at navigating through the site as directed by the publisher notes. I chose to use strictly the printed material for review. Accessed site later and used for my pt.2 review. • No table of contents or section dividers for notebook of sample problems. This made it difficult to find. • This program states there are a "dozen to several thousand" problems for each skill. I scored based on the fact that students would do as many of the problems necessary to meet mastery of that skill before going on. • Mastery is gained through repetition with no assessment of conceptual understanding. • Teacher guide consists of administrator issues of the program: how to set up, track, modify…does not offer actual content background or instruction techniques. • Teaching is done through computer/repetition of problems, not teacher. • Provides resources on how to integrate with other existing math programs. • Two references were not included with 7th grade material geo33 and geo86 for P.E. 7.3.B. • Examples show procedures, no concept development.

8	A problem with evaluating this product was an inability to go directly to a set of problems. For example, I wanted to look at screen ALGE 702 w.r.t. P.E. 8.1.G. but had no way for direct access. I would have liked to examine a few modules in more depth, but had to take a 30 question placement quiz…too time consuming given our average 4 hour constraint for each review. This product would make a powerful remediation tool both for home and classroom use. But it lacks in the process area.
8	• Written materials provided only showed explanations but there is ample opportunity to practice on website account for student. • As a teacher, somewhat difficult to get a feel for the progression because there is no ability to look at scope and sequence very easily. • Would be a good curriculum for independent study, on-line school, or distance learning. • No master topical index. • Would make a good supplement.
7/8	• Difficult to evaluate this program due to lack of index for printed matter and non-sequential numbering. • Very little process threading, connections, communications, partly due to electronic presentation limitations. • Graphical construction exercises, especially straight line with ruler, are very clumsy and time consuming. • Dynamic customization of specific units by student, class, or other grouping is very good and powerful. • Uses very precise and accurate mathematical language to describe and justify steps and explanations. • Mathematical relationships are often presented without derivation or proofs.

2.2 Bridges in Mathematics – Grades K-5

Grade	Reviewer Comments
K	• Technology not provided, but referenced. • No index. • Teacher information is "suggestion" and "direction" dense – key points are not easily accessed. • Ideas for differentiation and diagnostic assessment are "embedded" in the teacher narrative directions [i.e. Vol. 2 pg 349-350] and to discover these careful reading is required. • Could not determine if available in multiple languages from materials presented. • Rubrics not found but narrative "what to look for" present.
K	I can see the skill building and conceptual understanding but not sure about application.
K	• Number Corner p. 150, Daily Routine odd and even numbers - first grade standard. • * The online supplemental materials are a must for meeting the WA State Standards.

1	• The supplemental binder/activities which are available online are crucial to meeting our standards! I relied upon these activities heavily when reviewing this program. • There were mentions of practice sheets in the supplemental binder that were unavailable – they were stated as "Practice Sheets XX." (A3.17) • The organization of this program made it difficult to use because there were separate volumes for number corner and the Bridges materials. Teachers would also have to replace many lessons with the supplemental activities. • *Graphing ➔There were lessons with picture graphs, but not tallies, nor bar graphs.
1	• 1.1.B: Although the standard is embedded in the lessons as the publisher cited with a question or two it is not the focus of the lessons without explicit and repeated attention to the number before and after the typical student at grade 1 would not be able to achieve mastery. • 1.1.A: I could not find an instance of counting starting at "any number" only from 1 or backwards from the end number. • 1.1.F: Did not find the explicit development of the combinations to make 10 to achieve fluency. • 1.4.A: Supplemental D2 Act3-One length activity where students discuss consistent size (foot size is not consistent) one capacity activity as Home Connection. Not enough for mastery. • 1.2.D: One lesson directly relates the addition fact to its subtraction fact. Supp. A3 act 1. • * Supplemental materials available online are a major part of this evaluation. Teachers must use these as part of the program and the lessons (although not stated would need to become part of the daily routine until mastery (i.e. numbers before and after to 100).
1	• No index. • A lot of reading and a lot of things to prepare ahead.
1	This publisher took the time to extend their materials to address the new Washington Standards! It will require the teacher to ensure that this additional material is included in their planning.
2	• * Online supplemental materials are a must for meeting many of the standards in this review. • p. 337-347; Meets Grade 1 Standard 1.3.A. • I found more situations of modeling division and fair shares than multiplication situations.

2	• Technology piece not provided. • No index • Student materials taken from multiple resources – no unified student text. Management of multiple sources of teacher/student materials may present challenges for the teacher. • Teacher materials have extensive narratives directions and examples. The amount of material may become cumbersome for some teachers. • Predictable "self assessment" is not evident. • Assessment instruments assume no predictable pattern. • Limited multiple choice short answer options. • No rubrics in evidence. • No evidence of multiple language materials. • Home connection materials are vocabulary dense. • Vocabulary is not delineated. • Any intervention strategies seem to be embedded and are not readily recognizable as an intervention strategy.
2	• Many of the activities used to meet the standards are in the Bridges supplements for place value and base ten system. • No reference to technology was found and technology connection book was not included.
2	Publisher indicates that student practice workbook under development. This practice workbook would support lessons created for supplementary material for Washington.
3	• 3.1.D: Estimation as a strategy to check reasonableness in adding and subtracting is outlined in skills/concepts, however not developed over time (very difficult to find and is non-linear, very spiraled). • 3.3.B: The text begins to develop comparing/ordering fractions but does not explicitly meet the standard of denominators with 2, 3, 4, 5, 6, 8, 9, 10 and 12 (especially 8,9) • 3.3.C: Students would only make passing observations on the April Calendar, but this a great visual that builds throughout the month. • 3.4.E: Solving/verifying word problems was not evident. • 3.6: Reasoning, problem solving, and communication is lacking throughout the entire text and supplemental. The reference lessons provided were not accurate.
3	• 3.1.A: Only up to 1,000 – 10,000 is on Mar. Calendar but not specifically taught . • 3.2.A: Uses only arrays and number line – no evidence of counting by multiples. • 3.3.B: Content is mentioned but not enough is practiced for a student to master. • 3.3D: Word problems not numerous enough to achieve mastery. • 3.4: No word problems. • 3.5: Found E-1 worksheets but not sure if there are lessons or not. • 3.6D-J: These are implicit and not explicitly taught. * Very difficult to follow. There is no index.

3	• Standard algorithms are taught in a discourse setting where students could easily decide to discard it for other strategies before working with it long enough for it to become part of their repertoire. The supplemental piece has been added, but still offers limited practice. • Word problem practice pages for addition and subtraction limited to one strategy for all the problems. Ex: U.2 pg. 627 same diff. problems • The supplemental material for WA would be essential for meeting Grade 3 standards, not supplemental. • I wish there had been an index, highlighted vocabulary and not so much verbiage to the lessons, and page numbers on student example in the Teacher's Guides.
4	The supplemental materials created for Washington are often "must dos" in order to provide the instruction necessary for students to meet standard successfully.
4	• The supplemental binder produced by the Math Learning Center is an important part of this program. The publisher notes that lessons from this binder should replace some of the core lessons in the main teacher materials. More PE's are addressed by doing this. • This program embeds content into context – real-life problem situations; however there is not explicit instruction in how to use strategies to solve. • Opportunities for students to self reflect and goal set for their own learning. • Opportunities for learner choice in problems to complete/work on.
4	A very thorough fourth grade text set. While some categories were marked a 1, most of them were quite close to the 2 category.
5	• There are over 1,100 pages of teacher text in this curriculum which covers 8 units. The text is black and white without much bolding, italicized text, or highlighting. This made it difficult to read and the long lessons could make it difficult to follow and plan daily. • The lessons provide a depth of conceptual understanding and relevant, real-world problem-solving, but it can be difficult to ascertain whether or not students obtain mastery in computational fluency skills because not enough practice is embedded in the program.
5	• Supplemental binder adds additional content and practice that address the PE's with greater depth. • Opportunities for students to goal set and self-reflect. • Embeds content within context – real-life problems. • Little to no evidence of explicit instruction in problem solving.
5	• 5.2.D: Only 2 worksheets for this performance expectation of GCF and LCM. • 5.3.H: The performance expectation is to find lines of symmetry IN triangles and quadrilaterals. • 5.4.D: The performance expectation if for students to use coordinate pairs while reading/plotting graphs in the first quadrant.

2.3 Cognitive Tutor/Carnegie Algebra – Grades 5-8

Grade	Reviewer Comments
5	• Evidence for standard 5.1 for multi-digit division could not be found in the curriculum. The curriculum does not have a grade level below, therefore this content could not be located at all. The publisher listed examples of estimation and problem solving (5.1 and 5.1.F); however these examples did not contain the targeted content of multi-digit division. • I was unable to view all problems in the Cognitive Tutor Software because the program required that all problems be completed in order and I was unable to skip ahead.
5	• Appropriate perhaps for fifth graders who are gifted mathematicians. • Standard procedures are fully developed in one or two lessons – not enough modeling representation, investigating for the average fifth grader. • Much of the content is beyond the scope of the 5th grade PEs.
5	• Spiral Program. Minimum practice with each new concept, but brief multiple opportunities are provided again and again throughout the rest of the program for additional practice. • Very student directed. Little direct instruction from teacher. • This program relies heavily on computerized practice (40% of time). • A good portion of this program does not address 5th grade Washington state PEs.
5	Some material may be too advanced for a typical 5th grader & will require teachers to be selective of the activities done with 5th grade students.
6	Weak in geometry especially pertaining to circles & cylinders.
6	Much of the critical mathematics content is not explicitly included in the student or teacher materials and is left to student answers and teacher content knowledge.
6-7	• This product has potential, but given the time constraints and the required user model it was not possible to look at many problems. The "Done" button won't skip problems until the problem is worked. The table of contents will only give a summary (brief) of topics to be studied and otherwise can't be selected unless assigned from the teacher account. Both of these limitations severely restrict the scope and usability of the product. • The texts, both teacher and student, mix grade 6 and 7 topics which made planning and use a challenge. • I did see a few problems on line and, if the quality is consistent and the program made easier to navigate, this could be an effective remediation/enhancement tool.
7	• Very difficult for teacher to get overview of cognitive tutor w/out going through entire unit as a student. • Is there a way to look at all the content on cognitive tutor?
7	• Program lacks practice in areas where students need practice. • Program lacks key processes & in depth problem solving.
7	This is an algebra course and contains no geometry except Pythagorean Theorem.

2.4 Connected Mathematics 2 – Grades 6-8

Grade	Reviewer Comments
6	• Program requires the use of many different student books to fulfill all (or most) of the standards. Some lessons are skipped; this may pose a problem with the continuity of the units. • Includes test prep for NAEP and other high-stakes assessments. • All transparencies are included. • Teacher CDs included with planner and customizable test bank. • Must seek additional skills practice and drill from the Additional Practice and Skills Workbook (must use some from 6^{th} and 7^{th}). • No recommended scope and sequence.
6	• 6.1.B: Content is there but weak on making connections to area models/number line. Doesn't connect to related equation. • 6.1.F: Lacking practice. • 6.2.D: No application of properties; no evaluations of the mathematical expressions. • 6.3.A: Very weak on ratios, briefly mentioned 2X's. • 6.3.D: Verification appears to be nonexistent. • 6.3.F: Skill not totally developed. • 6.5.A: Estimation isn't mental computation. • 6.6.A-H: The process strands are isolated in the entire program. There isn't a richness of higher level activities for students to engage in.
6	• Teacher should be aware some of the problems reference Performance Expectations that are not at grade level. Ex: Accentuate the Negative asks students to find mean, median, range. • Connected Math provides extra practice worksheets in the Additional Practice and Skills workbook if needed. • Parent Guide very helpful to parents who need a refresher to assist their child.
7-8	There are some good mathematical teaching ideas in this series. In the hands of a gifted instructor who has a solid math background, this curriculum could work well for some students, but the flaws are in the implementation of the Student Editions. They are very inconsistent in both the quality and quantity of information offered to a student. For example, in grade 8, "Thinking with Mathematical Models" has virtually no information which in contrast, there is sufficient information in "Kaleidoscopes, Hubcaps and Mirrors" for student to figure out on their own how to do geometric transformations such as reflections and translations. This has several problematic results. First, parents will find it very difficult to help their students, particularly if they are mathematically weak. Second, the student has an inconsistent reference which hurts him if either school is missed (particularly for more than a day) or if the teacher is either weak mathematically or having classroom management issues. Third, without consistent examples and at least a partial answer key, the student is totally dependent on the teacher for checking work. Finally, calculator use is usually expected and encouraged which will result in the gradual loss of fluency.

6-8	• This program includes excessive use of calculators, with specific problems only possible with the use of calculators. • Many critical mathematical ideas and relationships are only reference in the teacher's edition introductory section. This is 3-levels removed from the student and is almost certain to results in key concepts not reaching all students. • Algebraic operations are underdeveloped or absent in the 6th grade. • Operations on fractions, especially multiplication and division, are underdeveloped mathematically and don't have sufficient practice.

2.5 CPM Middle Grades Program – Grades 6-8

Grade	Reviewer Comments
6	• 6.1.A: All fractions, no decimals, integers. • 6.1.B: All fractions, 1 decimal, no number lines. • 6.1.C: Only using mental math w / %. • 6.1.G: Only found on website. • 6.1.H: Mostly fractions, very few decimals ($) and no verify answers. • 6.2.A: Nothing using tables. • 6.2.D: Very weak on order of op. • 6.2.E: No check or verifying results. • 6.2.F: Problems – several were guess and check; no verifying results. • 6.3.A: Found only note – not part – part or part whole. • 6.3.D: Excellent/plentiful problems; no verifying results or any discussion of solutions. • 6.4.B: Not strong on circles, others very strong. • 6.4.C: Some explaining of answers; plenty of problems. • 6.4.E: No explaining of why the formulas work. • 6.5.C: Maybe in 5th? • 6.6.B: Nice problems / not relevant to the standard. • 6.6.G: Found no information from graphs, diagrams, etc. No justifying reasoning.
6	• The games element to this program provides opportunities to practice skills. • Skill Builders provided step by step procedures that would help guide kids and parents (i.e. page 21). Box-whisker plot instruction. More helpful for parents than kids. Could be a teacher resource. The reading level of skill builders would require a 9-10th grade level to understand a lot of the explanations. • General supplements available in a PDF format
6	Inconsistently met standards in most areas.

7	• 7.5.A: The opportunity for grouping is tremendous. The book however does not ask students to do so. • 7.6.C: Problem solving strategies are introduced throughout. Many problems lead themselves to more than 1 strategy, though the book never asks students to apply more than 1. • 7.6.A: Many problems lead themselves to pulling out information to determine what needs to be solved. The complexity of the problems is often insufficient. • 7.6.B: Did not find problems where students had to identify missing information or sort through extraneous information.
7	• 7.1.G: Publisher did not cite any fraction word problems – I attempted to use the index but I could not find page numbers referenced. • Section referred to "mm" problems - I could not find a section "mm" in teacher text binder, skill builders, or support lessons (mental math standard 7.2.A). • 7.2.G and 7.2.H: State Standards website? Screen not given, website not given. • CPM offered some conceptual understanding and a lot of student cooperative group engagement around a problem-centered spiral. Skill builders offered additional computation skill practice. • Organization was confusing at first,
7	• Material provided is under the impression the teacher has a degree in math. This is not for a teacher who does not feel confident teaching math. • Concepts are integrated throughout the curriculum, therefore very difficult to teach in a highly mobile community.
6,7,8	• 8.4.D: Students not asked to explain their choice. • Level 8 is very "wordy" and would require good readers as users. • In all three middle school levels, the students are walked through problems, or given so much information, that they need to do very little genuine thinking. The book tells them what to do next. • There is very little questioning of student's thought process; little to no "Why did you choose…? In grades 6 & 7. Grade 8 is a little better. • Level 8 – 7th Grade was given in alignment document – index was unusable—gave page #'s, but book page #'s did not match.
8	• Index in teacher's guide is confusing; for 7th grade. • Good problem-solving development throughout.
8	• Curriculum is problem-centered with some spiraling of skills and includes some construction. CPM algebra is very strong in algebraic topics unfortunately many grade 8 standards are found at grade 6 & 7 CPM levels. CPM(8) Algebra was weak in data analysis, geometry topics, and scientific notation/laws of exponents.

8	• 8.5: Throughout the course students are provided interesting problems that will engage kids regularly they are asked to describe the process used and/or justify an answer. • Technology rich – Chapter 7 – graphics calculators w/CPMTG, CBR's, Green blobs. • Readability level throughout the course is advanced. Typical students would struggle with the text. • 8.5.A: Students theoretically have to analyze the problem to determine the question. Rarely does the text explicitly ask the student to identify the question. • 8.5.C : Problems throughout are rich and engaging. To solve many, you have to use a variety of strategies to solve the problem. • 8.5.E: Even though there are a wide variety of problems, rarely are students asked to communicate through language. Almost always they use math symbols.

2.6 enVision – Grades K-6

Grade	Reviewer Comments
K	Lessons have a 'Daily Spiral Review', an 'Interactive Learning' segment a 'visual learning' component to develop the concept which includes guided practice with an error intervention and re-teaching ideas and a closing piece which addresses the essential understanding. It includes ideas for differentiated instruction and leveled homework. Each lesson begins with an overview stating the objective, essential understanding, vocabulary and materials list. Every lesson also has a 'Math Background for Teachers' section
K	• K.1.G: Number line lessons only go to 10 rather than 31. • K.1.D: Publisher referred to ordinal #'s, not the activity of actually putting the numerals 1 to 10 in order. There wasn't any activity that showed students manipulating number cards.
K	• Virtually all paper and pencil work, emphasis on visual learning. Very little if any modeling, entirely teacher-directed, Q and A, little if any opportunity to develop mathematics communication skills, reasoning or problem-solving. • Content is reviewed in Daily Spiral after only one teacher directed lesson. • Error intervention is useful and anticipated many misconceptions.
K	Many standards are not fully met in program due to limited number of lessons on a topic. Process standards have explicit lessons for each expectation but limited opportunities for students to use strategies. There are little to no opportunities for students to select a strategy to use or explain thinking on their own. There were little to no opportunities for open ended problems or student discourse.
1	• This program doesn't give students access to numbers > than 100 • Students spend very little time actually counting objects and putting them in groups of 2,5, or 10. • 1.2.B: Equations are only shown in the traditional way, ex: 5+3=8 not shown as 5+3=4+4 for instance. • 1.2.C: Very little work with number lines. • 1.2.H: Students have limited opportunities to create their own story problems. • 1.3.B: Students are not taught the terms rhombi, hexagons, trapezoids. • 1.4.D: No measuring weight using non-standard units.

1	• The hands-on activities are listed as optional for some lessons. • For curriculum review the topic number in addition to page # would have saved timed for checking alignment. • 1.4: Goes beyond non-standard units to standard units for measuring length. Too much of the weight and capacity is workbook rather than hands on activities. • Overall more hands-on time to develop concepts to a deeper level and not zooming ahead would improve student access and concept development (i.e. develop non-standard measures, big ideas in WA Standards rather than moving quickly to standard units and on to applications like perimeter).
1	• Rubrics: Writing numbers "correctly" is a developmental skill that isn't a mathematical skill and is inappropriate as part of a rubric for a 1st grader. Few opportunities to solve problems with multiple solutions. • TE: Material organization is complex and presented in multiple discrete units creating significant management challenges. Necessary student material can be easily misplaced. It appears time and work intensive for a teacher to prepare materials. • Tasks reflect primarily routine problems. • Most teacher instructions for developing thinking and problem solving strategies are designed to prompt predictable student responses rather than develop student thinking abilities. • Lack of a number line [not based on the 100s chart i.e. TE 532] as a key tool for developing number sense is significant. It limits students understanding of numerical relationships, patterns, and all operations. • Multi-step problems opportunities are not evident. • Self assessment opportunities are not evident. • Assessments are heavily, multiple choice format and pencil & paper. Age appropriate assessment alternatives are not provided. • Rubrics are provided but most assessment problem solving opportunities are response driven, not student generated. Rubrics in this case don't necessarily provide significant math content or process information for the teacher. Multiple choice options do provide…
2	• 2.1.E: The program only shows 3-digit numbers grouped in one way. • 2.3.D: This expectation is not covered in the depth described in the examples of this Performance Expectation. • 2.3.E: One lesson only on telling time at this grade level, and it is to the 5-minutes rather than to the minute.
3	• Curriculum materials contain an extraordinary amount of extra practice, enrichment, and interventions for each concept presented. Although not every activity outside of the core learning activities were identified in this alignment, it should be understood that they exist and are easily accessible to the classroom teacher. • The materials have also been aligned to use jointly with the program "Investigations." A detailed joint-usage plan exists to help teachers set how a "balanced-approach" to mathematics instruction can occur by using both programs simultaneously.

3	• Spiral Curriculum. • Very little in-depth.
3	Although many "content" pieces are strong, the "reasoning problem solving and communication" is missing from these materials.
2	• 2.2A: Topic 2 – Addition and Topic 3 – Subtraction ➔ Skills are introduced in only one or two practice pages and then they move on. Not nearly enough discussion and links made for mastery. • 2.3.E: Students are not taught to estimate – they are taught "estimation" through equations (ex. on pg. 555). • 2.2.H: Only ¢ sign / same total in different ways – on (in teach notes pg. 141B.) Seems to always be given the values and then students work to count totals.
4	This program provides most of the 4th grade standards but the sign is missing as is the problem-solving / reasoning / communication.
4	• Topic 2, Adding and Subtracting whole numbers includes core process (problem solving) and some algebra. • Topic 9 addresses some gr. 3 expectations for geometry. • Topic 11 – gr. 5 standards addressed throughout.
4	Good visual aids. Offers very little opportunity for discourse and applying problems in a new situation.
5	Although the standard's content may be addressed in enVision on one page, there is not a sufficient amount of learning opportunities for students to master the content. Therefore, a 0 was assigned.
5	• Topic 1 and 3 covers standards of gr. 4. • Topic 4 covers many standards of gr. 4. • Topic 7, Multiply and divide decimals doesn't address any of gr. 5 standards. • Gr. 4 enVision has activities that address gr. 5 geometry standards. • Topic 11, multiply fractions is not gr. 5 standard. • Topic 14, grade 4 standards of time and measurement.
5	• Very little constructivism. • Good visuals. • Repeated, spiraled practice is good. • The problem solving techniques don't allow for discourse, non-routine ideas. Overall impression, curriculum meets many standards. My greatest concern would be that the problem solving doesn't include verification opportunities or a "richness" of context that would lend itself to analyzing, extracting and organizing information, or communicating using representation and mathematical language.

6	• 6.1.B: Insufficient Evident –
	  o 6.1 fractions related to division (144-148)
	  o 8.1 X fraction and whole number (186-187) > 40 pages.
	  o 8-3 multiplying fractions- with area model (190-191) > 3 pages
	  o 9-1 Division of fractions - area model and number line (202-203) > 9 pages
	  o 9-2 Divide whole numbers by fraction – quotient (205-206) > 1 page
	  o 9-3 Divide fractions – quotient (206-207) > 1 page
	  o 9-6 Solving equations w/fractions and mixed numbers (212-213) > 5 pages
	  o There is too little presented for each lesson for students to stand a chance at mastery. Lessons last 1 day then are used in another capacity anywhere from the next day to 40 pages later.
	• There is not enough rigor or practice through this entire program to produce fluency or mastery. Even with the homework sheets, kids don't get enough engagement. Lots of supplementation would be required for student mastery.

6	• In order to develop the conceptual understanding a teacher would need to go through the interactive learning that is outlined in each lesson in the Teacher Edition. • A great deal of material; therefore teachers would need to work in professional learning communities to align material to Performance indications. • Writing to Explain contains samples of student work scored on a 4 point scale. • Differentiated Instruction incorporates cooperative learning and visual and kinesthetic models.

2.7 Everyday Math – Grades K-5

Grade	Reviewer Comments
K	• Not enough on decomposing numbers for full understanding. • Lots of work on patterns, but translating patterns barely addressed and not until the latter part of the year. • Very little on location words (K.3.C) • Numerous counting and number recognition activities throughout the program. • The progression leading students through understanding addition and subtraction from concrete to symbolic is thoroughly developed.
K	Problem solving: Publisher sighted graphing lessons and number story lessons but these lessons truly didn't reflect the PEs for problem solving.
K	Many of the Activities cited include directions to continue using the activity throughout the year, with increasing complexity (e.g. pattern p.63), "Revisit" reminders appear in later lessons (e.g. Number Stories p. 151).
1	• Line plot (TE 248): relate to 1.5.A, picture graph – representation. • Program Organization and Design: 5 units w/ Distributed Practice – students have sufficient time to develop ideas.
1	• There seemed to be a lack of lessons suggesting that students draw a pictorial representation for addition and subtraction equations. • There was no clear evidence of adding 3 or more single digit numbers using the commutative and associative properties. Associative property wasn't mentioned at all.

1	Many Concepts are spiraled with broad intervals between presentations. A teacher might have to jump around a lot to find many supplemental items.
1	• This program has many short sections in each lesson which spiral. There were very few lessons which provided time for conceptual development before going to another topic within the lesson. • The problem solving opportunities were very limited in number and depth. There were few opportunities for students to spend enough time with an idea or problem to develop understanding.
2	Good tips for ELL students.
2	• This program uses base 10 manipulatives to lay a strong foundation for understanding place value. I like that it continues to use concrete ➔ pictorial ➔ abstract progression for each new concept. • The teacher's manual guides teachers on the content and concepts children have covered prior to the lesson. It also provides links to the future development of the concept. • Concepts are reinforced several days later with practice math journal, game, etc.
3	• 3.1.D: Estimation is referenced in the student book but not specifically taught. • 3.2.A-B: Not enough array or number line work to meet standard. • 3.5.E: No pictographs, line plots & freq. table.
3	The program spirals a lot and does not address coherence and well-developed sequence.
4	• The Teacher Lesson guides are well organized and easy to follow. • The Teacher Reference Manual provides information about mathematical content. • The program shows little evidence of developing students' ability to master fraction PE's at 4^{th} grade.
4	4.5 Core Processes – The Publisher listed a long list of pages in every PE (all the some in each PE). When I looked at the pages listed each specific PE didn't appear to actually be reflected in the activities of the pages, making it difficult to gather evidence to support each PE specifically.
4	This program touches on many of the standards but in a spiral format that prevents depth. The resource materials and assessments are more in-depth and qualitative, but the onus is on the teacher to make sure all aspects are covered. The manual isn't as teacher friendly as it could be. The pages are busy and difficult to discern quickly.
5	• 5.1.B: Multiples of 10 and 100 are addressed several times through multiplication, but there is little evidence for determining quotients for multiples of 10 and 100. • 5.1.C: The partial-quotients algorithm is emphasized. A website lesson for the traditional algorithm is available. • 5.3.C: Little evidence of classifying triangles by their angle size, mostly triangles are classified by the length of their side. • Materials are well-organized and easy to follow. • The Teacher's Reference Manual provides good content support.
5	• Lessons are well-laid out and target a specific concept, but there isn't in-depth practice/use by the students before moving on to the next math idea. I'd rather develop a concept deeper than wait for it to spiral back in a year or two. • Unit Assessment pieces have a few word problems, but the reasoning and problem solving piece could be stronger throughout.

5	The Teacher's Lesson Guide provides a spiral of reviewed standards; however the conceptual understanding isn't developed through a sequence of rich lessons.
5	• 5.2.D: Mentioned to do activity in SRB but not specifically taught. • 5.3.F: Game, but no direct teaching.

2.8 Everyday Math/Transition – Grades 6-8

Grade	Reviewer Comments
6	This program exposes students to many mathematical concepts. Few if any are studied in depth or to mastery.
6	Reasoning, problem solving, and communication standards are embedded throughout the curriculum in the form of math journal pages, study link master worksheets, and open-response problems. This is apparent for most lessons. There is also a problem solving section in the student reference book, however I couldn't find in the teacher's lesson guide how this section might be taught and used. Problem solving instruction difficult to find.
6	I like the idea of a teacher's reference manual and a student reference book. Excellent use of examples for students to follow especially with the home connection.
6	• There is a great deal more content that doesn't meet the Performance Expectations for grade 6. Good parent letters explaining the content for the unit found in Math Masters. Student Reference book a must have for all students. • Teachers would need to be intentional when planning units to align with PE's.
7	• Lesson 7-5 "Short Division": I do have concerns that teaching the short division as an algorithm would cause confusion with kids who are also striving to be more proficient with exponents. Simply stating a note that it looks like an exponent, but is not, doesn't seem to be enough to prevent confusion. • 7.2.A: Nearly every lesson begins with a "Mental Math" warm up. While some of these problems do encourage mental math strategies, these strategies aren't explicitly taught. For this reason, many students may rely on simple calculation to solve the problems. The lesson on Calculating Percent in your Head (6-6) shares wonderful mental math strategies. It's disappointing that more of these strategies aren't encouraged in other lessons dealing with fractions and decimal operations.
8	• Performance Expectations are evident in multiple chapters of the textbook. Teachers need to be aware that to achieve mastery it will be important to align text with standards when lesson planning. They may jump around from chapter to chapter. The text will provide the material to teach from the standard. • The review sections reference chapters in previous units with the new standards. Some of the chapters may not be touched; therefore the Spiral approach in the review may not be used.
8th	There are projects available at the end of each chapter, however many of them don't involve higher level thinking. For example one project simply asks students to cut out examples of graphical displays from a newspaper and past them on a board. The Publisher sites these projects as evidence for Standard 8.5

2.9 Growing with Mathematics – Grades K-5

Grade	Reviewer Comments
K	• K.1.A: Rote count from 1-100: managed to find some evidence of count to 70 (in vol. 12) yet the assessment in rote to 20. Very confusing. • K.1.B: Numbers from 0-31 – once again, some evidence of counting to 70 (Vol. 12) yet exploring numbers include 1-30. Not clear. • Other factors: There were several "other factors' that were difficult to rate because they weren't so applicable for K- since NA wasn't an option, they were rated as "Disagree" – e.g. Assessment #8 – accurate keys are provided.
K	A strong constructional approach to learning a good variety of manipulatives.
K	• Promotes student discourse and working with a partner. Many hands-on activities. Builds conceptual understanding. • Easy to use teacher manual includes actual pictures of activities and student book pages.
1	• 1.1.C: Couldn't find evidence in curriculum this standard could be met. • 1.1.E: Numbering needs to go to 120, that's the mark when children have a clearer understanding, teens, 0s. • 1.2.C: Couldn't find number lines. • The use of correct terminology is important (kite, rhombus) did a good job with this. • I found the practice sheets in each lesson to be valuable to reinforce the lessons taught previously.
1	What is in the program level is good, but will need some supplemental support of other material to meet mastery of the new math standards.
1	• Program is limited in content depth and limited in rigor. • Organization of materials presents a challenge when attempting to view over all scope and sequence. • Lack of number line as a tool is significant because number lines offer opportunities for developing number sense, patterning and understanding of operations. • Limited emphasis on "student" development of strategies for problem solving. • Limited opportunities for ongoing practice to deepen and/or broaden student understanding of concepts/skills. • Limited reference to math background in lessons. • Ongoing assessment opportunities don't suggest what should be noted and why. A continuous assessment progression isn't evident. • No obvious reference to multiple languages or ELL strategies. • No obvious comprehensive index; no individual index for "Topic" books. • Technology pieces unavailable for review. Program lacks suggestions and opportunities. To promote/apply/develop higher level thinking related to concepts presented. • Limited evidence of multi-step problems.

2	• 2.2.C: The "written algorithms" mentioned by the publisher for addition and subtraction are the US standard algorithms for same. • The "inverse relationship" concept for addition and subtraction isn't mentioned as a problem-solving strategy for students to self-verify their answers. • Student Books Vol. 1-2 provide an adequate number of practice problems. The Discussion Book is primarily pictures (most cases real-world) illustrating various mathematical operations (e.g. clocks, money, graphs, etc.)
2	• The mathematics from many cultures is a valuable supplemental tool. • Lacking in "How to Help at Home" sheet for parents and guardians (would be even more helpful if written in multiple languages).
3	While these materials include core content and core processes, it has a sparse quality. Consequently, I wouldn't feel confident calling it a complete instructional package. While some programs may be verbose, this one seems too concise and doesn't scaffold student learning enough. I notice that the processes in 3.6 are concentrated in certain Topic Books/Investigations. For example: 2.4, 22.4 + 23.5 are 3 lessons that recur as evidence for Problem Solving PE's, but not evenly throughout the programs.
3	3.1.A: Place value concepts are built through the thousands place. Program doesn't provide enough practice opportunities to develop computational fluency.
3	The concepts in this program are developed in mini units that seem to chunk the learning rather than give an in-depth understanding of a major concept.
3	Mathematics from Many Cultures brings in culturally diverse activities w/math content/skills.
4	4.5 CORE PROCESS: Students have opportunities to reason, problem solve, and communicate through teacher—directed dialogue. Often these seem to touch the surface of a concept rather than seek deep understanding.
4	This program continues to touch on core content in a surface manner without going into the depth to promote mastery. The spiral adds to the lack of cohesion and depth. Teachers who are experienced with enhancing and supplementing would use these materials as seeds to grow a complete curriculum. I doubt new teachers would be successful using these materials as they are. Topics jump too quickly and lack significant scaffolding.
4	Standard 4.4.A lacking. Publisher may have a misunderstanding of the standard.
4	• This program has lots of parts for the teacher to work with. That may bother some staff. • Offers real-world math from other cultures, literature and genuine application in problem solving. • Each investigation begins with a real-life problem, to solve. Skills/concepts are embedded in that problem. • Quite a bit of the program doesn't address Washington's Performance Standards. • Each investigation provides a dip into a concept or study but doesn't work to full mastery. • Each investigation provides opportunity for problem solving, but there isn't direct instruction on Problem Solving PEs or strategies.

5	• 5.1: No place value models with division – doesn't give enough practice up to 4-digit divisors varied contextual problems. • 5.4.D: Got to 1 digit divisors and estimating very well. • 5.5: Nothing on prime composite. • Although many standards are addressed–numerous are superfluous. I wish the TE gave time guidelines or relations to past learning–not a lot of extra practice throughout the year to prove mastery.
5	This grade level version of Growing With Mathematics is similarly sparse and disjointed to the 3rd and 4th grade versions. Except for the Algebraic PEs and The Topic Assessment, it didn't meet standards.
5	5.3.H: Symmetry had been a 4th grade standard…and has moved into 5th grade.
5	• 5.1.E: The Publisher cited using a companion CD, however we did not have the computer in which to review this material. • 5.2.D: CD software not accessible. • 5.2.H: The Publisher cites lessons which do have at least some of the components of this Performance Expectation, however the material isn't explicitly taught nor discovered. • 5.3.A: It isn't evident that this is explicitly taught/learned. • 5.3.B: It isn't evident that this is explicitly taught/learned. • A lot of the lessons that meet out Performance Expectations weren't correctly cited or cited by the Publisher.

2.10 Holt Mathematics – Grades 6-8

Grade	Reviewer Comments
6	A well organized competent curriculum with many teacher support items both paper and online. Unfortunately assessment material was not provided for evaluation.
7	• Glossary in English and Spanish together. • Ample opportunities for practice in supplemental guides. • Questioning strategies handbook provides high level questioning skills. • Student work in text where students analyze another student's response, score it and discuss. Powerful self-assessment tool.
8	8.1.A – 8.1.G: • Excellent coverage in content. • See no "Show your work", "Justify solution", "Check your answer", etc. • Hands on Lab – Rarely helps with the 8.5. – Reasoning, problem solving, communication. • Very user friendly (student, teacher, parents). • Excellent coverage of material.

7-8	• Questioning strategies resource is a list of possible questions that have 1 or 2 right answers – not necessarily strategies to help promote discourse. • Surplus of resources available to teachers. • Although text is fairly traditional with a lot of problems, the problem resources and unit projects can be incorporated to develop a balanced program. This could be more of a challenge for beginner teachers or those who are not familiar with Best Practices in teaching math. In this case they may opt. to focus on the daily lesson only without providing the lessons necessary to develop conceptual understanding. • Both 7^{th} and 8^{th} grade texts had many of the same concepts being taught.

2.11 Holt Pre-/Algebra 1 – Grades 7-8

Grade	Reviewer Comments
7	• Key vocabulary is presented in a clear manner, in a meaningful way as it is introduced. • Misconceptions presented "Common Error Alert". Easy to find, solid examples of a misconception. • 7.6.B: Interactive Problem Solving book has lots of practice for problem solving that guides kids through steps to understand the problem, make a plan, solve and check. • Technology Labs are useful for kids, particularly those learning how to use the graphing calculator.
7	• The curriculum has a good alignment in most areas. • The weakest areas in alignment seemed to be in representing proportional relationships using graphs, tables, and equations and making connections; relating proportional relationships to slope and similar triangles; and analyzing proportional relationships. • The guided instruction notes were basically direct instruction noted for teacher to tell students. • Curriculum provided lots of examples and procedures (algorithm based) and lacked sense-making and conceptual understanding of mathematics.
8	• 8.5: Problem Solving Applications throughout the book. • 8.5: Strategic steps broken down: 1) Understand the problem, 2) Make a plan, 3) Solve, 4) Look back. • Chapter 0 provides students with a quick review/tutorial of previously taught concepts from other courses. • 8.5.C, F: Throughout the book there are problem solving sections that require the student to detect and implement problem solving strategies. Of particular interest are other sections i.e. 909 #6 Diving, #7, Construction, #8 Navigation. These types of problems help the student identify advanced work within the realm of real world applications.

8	Nice features: • Ready To Go On Quiz as part of the student book, can be used by student and/or teacher as diagnostic. Challenge problems provide opportunities to extend/enrich concepts and perhaps challenge good students, Teaching Tips and Intervention Strategies. Although there is almost no geometry in the text, there is a fair amount in the Intervention and Enrichment Resource Book addressing some of the geometric PEs for grade 8. • Overall this is an excellent algebra book but may be too much for 8th grade math.
8	• Very comprehensive and mathematically rich program. • Contains a significant amount of material which is beyond Grade 8 standards, but would be an excellent accelerated Grade 8 or 9th grade Algebra text. • Good balance between procedural, technology, and student inquiry. • Massive resource base for instructors, including lesson plans, lesson materials, etc. Short up-to-speed time.

2.12 Impact – Grades 6-8

Grade	Reviewer Comments
6	• Chapter 7 was missing from teacher's edition(s) available for preview. This meant several standards received a "not met" score. The standards missing may/may not be supported in Chapter 7. • Assessment materials, such as summative exams, weren't available for preview.
6	• Missing Chapter (7) pp. 396-465 • Table of Contents indicates (suggests) that Core Content 6.4. A, B + D-G may be missing chapter.
6	• 6.1-6.3: The Impact curriculum seemed quite "strong" in developing a balanced program for 6.1-6.3 standards. • It is unfortunate that Ch. 7 was missing in the binder of materials provided to reviewers. • The problem solving was straight forward and lacked the richness/contextual situations where students would really have to analyze, extract, organize, and communicate mathematically. • Students were sometimes asked to explain their answer but often times only an answer was expected.
6	6.4.A-G: Could not evaluate the standards to series because Chapter 7 was missing. Pgs. 396-465.
7	• Pacing guide indicates the majority of lessons are taught in one day. It would appear to me to be very difficult to follow the pacing guide. • Surface area and volume lessons are very weak. • Nothing on fractions. • Excellent units on proportion/scale/measurement/graphs.
7	• Can't check grade 6 for standards in 7.3 group since Grade 6 pages are missing. • Large sections of the book don't address 7th grade standards (example: Ch 1, most of Ch 2, Ch 4, most of Ch 7).
7	Assessments not available to preview.

7	• Very thorough integer unit. • High level of reading skill required. • Very advanced for 7th. • Too many "answers may vary" as response to question. Publisher should give examples. • Topics in book are covered well, but many holes.
8	• 8.1.E: Needs more contextual situations. • 8.1.F: Citations are entirely in the "on your own" section – not instructional. • Grade 7 has Chapter on Real Numbers (8.4.D). • Grade 7 has Chapter on Magnitude of Numbers (8.4.A). • Grade 7 has Chapter (9) on Equations (8.1.A). • Grade 8 has several chapters unrelated to WA standards at grade 8: o 8. Quadratics o 9. Quadratic Equations o 3. Percents + Proportions (good for grade 7) o 5 Algebraic Expressions o 12 Algebraic Fractions
8	• Impact is limited in practice of concepts.

2.13 Investigations – Grades K-5

Grade	Reviewer Comments
K	Highly programmed with concentrated units that don't always match the new Washington Standards. I found the flexibility to be lacking. The addition and subtraction was there but weak.
K	• K.2.C: Addition and Subtraction is mainly to 6. • K.4.A: Only addresses length, not capacity.
K	Professional development: Teacher Notes sections of each unit are of considerable value, particularly for Core Processes K.5.
K	• Measurement of weight and capacity not in program. • Measurement of length and width is with non-standard units, rather than just direct comparison.
1	• There is a follow up guide for each standard–well written. • The student activity book is well written, but difficult to open up to each unit. • Professional Development information throughout units. • Insufficient Evidence–zero is given, activity online, couldn't find in books.
1	For 1.1.D, 1.1.I, 1.4.D and 1.6.C Publisher cited online activities to cover these standards, however the online activities were not made available to view.

2	• 2.1.A: Could not find any evidence to support student learning of counting to 1000, either forward/backward, by 10's or 100's. • 2.1.B: Number sense and place value lessons don't follow a coherent order nor provide students with enough "math" content examples or practice. Key concepts (e.g. inequality symbols <,>,=) should not be presented as a mere footnote in the margins, but rather highlighted (i.e. italicized) in the body of the lesson itself to emphasize its importance. • 2.2.A-D: There is evidence to support student fluency in addition, although the US standard algorithm for addition is rarely addressed. There is less evidence that students will develop mastery of subtraction and the standard algorithm is rarely addressed. The inverse relationship between addition and subtraction is mentioned as an algebra note in the margins; this Key Concept is critical to a student's ability to self-verify answers and should be addressed in the lesson itself instead of as a side note.
2	• While this is a widely acclaimed series, it doesn't fit well with the new Washington Standards. Many parts of most standards are only partially addressed and the classroom teacher will need to augment the lessons to attain mastery for their specific grade levels. There seems to be a lack of basic skills maintenance throughout. • This doesn't appear to be a strong program for schools that have a large population of disadvantaged students.
3	Comprehensive Table of Contents in Implementation Guide us very helpful.
3	This program is strong in building conceptual understanding. It would be stronger with more practice opportunities for students to master skills and build computational fluency.
4	• Several 4^{th} grade performance expectations are addressed in the 5^{th} grade program. • This program is strong in building conceptual understanding, but is limited in skills practice and computational fluency.
5	This program is very strongly scaffolded to support student learning of the core concepts. Students are continuously engaged in critical thinking guided by their teacher and the materials. While not every standard is present, the majority were or have been briefly supplemented by the Publisher. Although there are many opportunities for thinking and problem solving, there was little evidence for the explicit teaching of standards 5.6.A, B and C. Nevertheless, I did find a citation for 5.6.C on my own - the Publisher provided none.
5	Program has a good variety of hands-on activities and class discussions. The Math Workshop that allows students to choose from and cycle through a set of activities engages the students as learners. There did not seem to be enough independent computation to allow students to reach mastery.

5	• This program is broken into small units, each in its own booklet. That may bother some staff while others may like it. • Uses games to practice computational skills. • Uses "real-world" problems to investigate. • This program provides a family/home support component, as well as bilingual (Spanish) versions. • Some units in this program not used, or used very little (do not address grades PEs): Units 2 & 3. • Teacher text cleanly organized and text features make it easy to negotiate. • Conceptual program. Limited paper-pencil practice w/computations. • Parent support strong. • Online teacher resources available.

2.14 Math Connects (Elem) – Grades K-5

Grade	Reviewer Comments
K	• Publisher provided "Program Alignment Worksheet" were often misleading. • K.1.B: Pg. 215 reference made to "count a calendar month" – 30 day. • K.1.E: Couldn't find evidence to support "count out a specific number of up to 20 objects from a larger set." • K.1.H: No evidence found to support Performance Expectation • K.3.C: Vocabulary specifically addresses: over, under, above, below, top, middle, bottom, before, after. • K.3.B: 3D shapes sorted by following attributes: roll, stack, slide. • 3D shapes include cubes, cones, cylinders, and spheres. • K.4.A: Lessons also include Area (covers more, covers less) and Temperature (hot, cold, temp). • K.5: Each of the 12 chapters contains a "Problem-Solving Strategy" exercise. Additional Problem-Solving Project (4) are also included to develop a student's reasoning and problem solving skills/strategies. Other factors: • Items that did not pertain to K were marked w/"disagree" (e.g. test using technology to deal w/messier numbers. "not applicable to K students". • Materials are available in English and Spanish (no evidence of any other languages supported).
K	I wonder whether teacher will be using all resources. Can he/she just use IMPACT Mathematics' or just the Math Connects? Is it realistic to do both? And how about Math Triumphs (which is not provided). Do teachers need to know all 3 of them really well in order to use them well?

K	• Only up to 10's, not 20's. • Good test practice pages. • Pattern work vertically as well as horizontally; good visual for future place values. • Games closely fit curriculum yet entertaining. • Chapter 10, pictures of common world shapes such as door for rectangle, pizza for triangle gives a teacher the opportunity to reinforce language skills while relating math skills.
1	• The Publishers "Program Alignment Worksheets" were often misleading and/or incorrect. • 1.1.A: Pg. 261B – The "Independent Work Option" #1 (early finishers) incorrectly illustrates the counting by two's – (illustration has green vertical line thru 2, 12, 22, 32, 42…92 which is actually counting by 10's from 2). Students count forward to 100, not 120. Brief mention of counting back from 100-91 on pg. 252; from 20 pg. 30, from 15,17 and 10 pg. 40. • 1.1.D: Ordinal numbers found in Gr. K, Lesson 4-9 first, second, third, fourth, fifth and sixth. • 1.1.B: Could not find evidence that PE is met; examples did include "just before, just after" but no reference to "one less than", or "one more than" except when introducing in equations (<,>,=). • 1.1.C: In "Looking Ahead" lesson LA 3 and LA 4, "Hundreds" and "Place Value to 1000" begins to teach concept, but students aren't instructed to read aloud numbers. • 1.1.E: Only addresses numbers up to 100. • 1.1.I: Could not find evidence for demonstrating that a number is odd or even. • 1.3.B: Students are only focused on triangle, rectangle, square, circle, side. • 1.2.E: Addresses commutative properties, briefly addresses associative properties in Lesson 5-1 "Gifted and Talented" section pg. 155B. • 1.4.F: Brief mention of days of week and use of a calendar – impact pgs. 55, 56, 58. • 1.6.A-H: The "Problem-Solving strategy" and "Problem-Solving Investigation" lessons in each chapter satisfactory promote the mastery of the standard. Other Factors – materials are only available in English and Spanish.
1	Technology was referred to in T.E. but not available.
2	• Since IMPACT is listed as resources for the alternate lesson. I am worried that there is not enough rigor in just using Math Connects. I wonder about the lack of challenges in "student's higher level training". • Only certified "Suggested Scoring Rubric" for Projects in IMPACT not for problem solving. • "Reflecting on what I learned" – only see in IMPACT
2	A strong semi traditional approach with lots of worksheets. Not a complete match with the new standards.

2	• Problem Solving Strategies are prescriptive rather than age appropriate, investigative or developmental. Algorithm development for addition and subtraction is quickly focused on the traditional algorithm without sufficient time for conceptual strategy development by the standard. • Self assessment opportunities/instruments are not apparent. No rubrics readily apparent. • Program has limited exposure to typical customary and metric measurements of 1 foot, 1 yard, meter.
3,4	• Uses "number sentence" not equation. • Wow! Easy to use – many resources, logical flow – teacher and student friendly. • Many problem solving opportunities – seems a bit too directed with no multi-step problems.
3	• A very aligned program in <u>many</u> standards…but lacking appropriate problem solving: needs more space ➔ see Ch. 3 Resource Masters P.51 #11 – There is no room to explain. • Teacher Edition pg. 120 #21-26 no room to solve or draw a picture. #25 says to explain, but where?
3	3.1.B: The Performance Expectation is not completely met.
4	• 4.1.I: Only single steps word problems. • 4.2.I: Only single steps word problems. • 4.3.C: Nowhere does it specifically ask students why the formulas work only what <u>is</u> the formula. • 4.3.D: Insufficient evidence in text – brief mention and 2 worksheets. • 4.3.I: At least 50% meet. • 4.4.E: No range. • 4.5.C: Insufficient evidence.
4	• 4.3.B: The Performance Expectation is only met via playing the "Area Guess" game on pg. 463 and is not applied nor extended. • 4.4.E: The Performance Expectations are met for median and mode but there are no lessons using range.
5	5.2.G: No estimating decimals for reasonableness.
5	Curriculum spirals and does not provide what is needed to develop in-depth mastery in a year or two.
5	• 5.3.B: The text only introduces/teaches classifying/drawing angles in 1 setting. • 5.3.E: Area of a triangle is not taught. • 5.3.F: Area of a triangle is not taught, however parallelograms are taught. So, perimeters of triangles and quadrilaterals as per this Performance Expectation are covered. • 5.3.I: The Performance Expectation is to determine the number and location of lines of symmetry IN triangles and quadrilaterals. This Publisher cited lines of symmetry outside of triangles and quadrilaterals which we define as translations, reflections, or even rotational symmetry; not mirror symmetry. • 5.5.B: The evidence cited by the Publisher only covers median, mode, data, and some range. Mean is not evident at this grade level. Present at the 6^{th} grade level "dip up".

2.15 Math Connects (Middle) – Grades 6-8

Grade	Reviewer Comments
6	Math connects, by itself, is a more traditional approach. Blending MathScape with it provides students with more conceptual learning through various investigations.
6	• Foldables are a great reinforcement for kids. Appropriately used throughout. • 6.3.D: Very simple single step problems. No multi-step found. Word problems are more of a statement of givens that you do something with. Rigor is increased by asking student to explain its meaning (3.5b). • 6.6: Most of the problems are single step problems. Rigor is questionable.
7	• Math Connects is extremely easy to navigate through. There appears to be plenty of skills practice, problem solving, and enrichment available.
8	• Comment for 8.2.E – This standard asks that students are able to quickly recall the square roots and perfect squares from 1-225 and estimate square roots of positive numbers. Although lesson 3-2, pgs. 148-151 demonstrate estimating square roots well, lesson 3-1 jumps beyond supporting the learning of most students to quickly recall the square roots and perfect squares from 1-225. • Using examples like negative (square root of 25/36) and ± (square root of 1.21) would intimidate most students causing them to shut down and never achieve the mastery intended in this standard. • Presenting this curriculum as a bundle ensures that students get thorough understanding of the standards as well as the process standards. If a teacher were to rely on simply one text over the other (MathScape vs. MathConnects) the integrity of the program and its ability to fully meet the standards would be lost.
8	Program appears to cover K-8 standards well. The process strands are woven throughout.

2.16 Math Expressions – Grades K-5

Grade	Reviewer Comments
K	No use of a number line at this level.
K	A "Middle of the Road" semi traditional program.
1	• 1.1.C: Could not find evidence of reading numbers to 1,000. • Only 1 lesson using non-standard units. • Couldn't find where tallies are taught in data collection.
1	• Great individual white boards for students. • Daily Routines reinforce skills. • Differentiated instruction ➔ Activity Cards (intervention on level, challenge) • Addition and subtraction is introduced quickly by acting it out and moves right to pictorial representation. It relies heavily on pictures and not physical objects. Not many hands-on lessons with manipulatives. Relies heavily on workbook pages.
2	• 2.1.A: No counting by 100's forward or backwards. • 2.4.D: Covered at 3rd grade.
2	There appears to be many good lessons included in this plethora of pages. This level of material is quite broad and sometimes not very deep. A good "General" Math Text approach.

2	All lesson components should be included: Quick Practice, Daily Routines, and Spiral Review. "Going Further", and Differentiated instruction (challenge activity) activities were often referenced in this review.
2	• Differentiated instruction ➔ activity cards (intervention, on level, challenge) has Daily Routines listed in beginning of manual. • ELL hints. • Ongoing assessment ideas. • Great whiteboard included!
3	• Seems like too many student pages to go through the day. • The Teachers Manual is very wordy (1,100 pages) and not teacher friendly.
3	I wonder how many other grade level's standards are addressed in this curriculum.
4	• Student application and use of own strategies to solve problems are missing. • Problems are presented to the students as a "fill in the blank" approach.
4	• There is so much to cover in these 1,000+ pages. It may be challenging to distinguish between essential grade level activities, enrichment, extensions, and pre-requisites for the next grade levels. Priorities and PD need to be established and clearly outlined. • The breadth of material covered is sufficient. Depth and level of activities isn't always, and ample opportunities to practice may not be sufficient in many areas.
4	In the Math Expressions (4) program, the term "Shortcut Multiplication Method" is equivalence to the term standard algorithm.
5	• This program's strength is its computational frequency, use of equations, and numerical operations. It does little to help students conceptually understand the math. • NOTE: The publisher's alignment and the index both refer to pages greater than 638. Volume 1 goes to page 638. Volume 2 starts a different numbering system without numbers higher than pg 638. I tried to find the expectations/material by using unit outlines.
5	Because Volume 2 of the Teacher Edition's page numbers was incorrect, I was not able to evaluate everything that was submitted by the publisher. Therefore, a score of zero was applied.

2.17 Math Out of the Box – Grades K-5

Grade	Reviewer Comments
K	• Content continuum is very steep and does not allow adequate time for a typical student to build understanding before the skill/concept advances. • No reference to a technology piece: or multiple language access. • Individual resources lack an index. • The content that is age appropriate is not well developed. Content that is not age appropriate is well developed and consumes valuable time inappropriately. • Because age appropriate concepts are addressed so quickly, typical students will struggle to understand the math. The program states "questions are also provided so students will connect present learning with past learning…" but teachers are not given suggestions to help activate prior learning. Little evidence found about "common misconceptions" is evident. "Assessment" found at the end of each lesson is a set of questions about students. No follow up course(s) is provided to help address differentiation needs.
K	• Lay out of lessons are well arranged: o Vocabulary o Engage o Investigate / Analyze o Reflect o Apply o Assess o ☺
K	Many ideas in this program were well developed with many opportunities for practice and reinforcement. Some core number ideas had a few well developed lessons but little to no practice or reinforcement.
K	Teacher's guides do not discuss how the teacher facilitates an inquiry approach to learning mathematics. Ongoing professional development would be offered regionally. (Not readily available). See publisher's PD Questionnaire response.
1	• All lessons start with engage, move to investigate, and end with reflect/apply and assessments (learning cycle). • Many lessons rely on a literature book which may not be available in all classrooms.
1	• 1.1.A: All of this PE well developed in this program except no counting backward. • 1.2.I: Students are "exploring" patterns on a 100 chart and in + and – problems, but not creating & extending # patterns. • 1.2.H: Not enough opportunities to create word problems. • 1.5.B: There were many opportunities for the students to answer comparison questions about data, but I couldn't find evidence of where the students themselves were prompted to ask questions about the data. • 1.6.A-H: Not enough explicit teaching of problem solving strategies nor enough practice with story problems for mastery.

1	• No technology evident. • No index in resources. • No multiple language material apparently available. • Age appropriate material needs more emphasis and development over time. • Age inappropriate material needs less emphasis. • Teacher prep focuses mainly on what is ahead in the lesson rather than on background information. Prior knowledge needed for students to be successful. • Little support for differentiation of instruction or content. • No apparent self assessment instruments. • Diagnostic assessments not evident. • No multiple choice options in assessments. • Program appears rigorous beyond reach of a "typical" student.
2	This program had many home connections activities that were dependent upon parent support and critical for next day's lesson. A student without daily parent support at home would possibly have great difficulty mastering concepts.
2	Promotes student discourse – explanations & verifications.
2	• Although this program mentions technology (i.e. calculations) as a problem-solving tool, there is minimal dependency on its use. • Problem-solving strategies are inferred in lessons, not spelled out. Students are asked questions to discover their own strategies. For struggling students, the burden for providing problem-solving strategies is on the teacher. It may be helpful to list "tried and true" strategies (i.e. inverse relationship of subtraction/addition) for student self-verification as opposed to <u>always</u> relying on "Guess and Check." • 2.2.C: Although three strategies are identified (DNCB L9-81), none of them introduce the concept of "regrouping," which will be further developed in Grade 3. Students are taught strategies to answer problems but are not taught strategies to check their answers, (i.e. self-verification usage inverse-relationships). • This program provides a rigorous and challenging curriculum. • DMB L4-31, L 5-39 contains a table for U.S. Customary units of lengths and metric system units of length respectfully. • 2.3.D: Although there is a lesson plan devoted to calendars, student would not come away knowing the relative size of a day (24 hrs) week (7 days) month and year, etc. • DAT L7 introduced calculations to students as a tool to generate and verify number patterns. Student exploration of numbers using a calculator should not be used as a substitute for student explorations of numbers using their brains.
3	These materials offer an excellent balance between content and balance. The teacher notes encourage discourse between students and offer support for a teacher in this area.
3	• This program has a great deal of text for the teacher to have to read through for each lesson. Text features (such as bolding, headings) are not supportive for the reader. Might provide a challenge to teaching staff. • Strong spiral program. Units sequenced with little connection to each other. • A good portion of this program does not address the Washington State standards.

3	• Having the Teacher's Edition separate from student text is very cumbersome. • This does a good job of developing the process strand for explaining a strategy. • Interesting order for multiplication – teach skip counting then have flash cards for facts 1-6 – arrays then all the facts. This does not teach a strategy of x2s then 4s etc… It jumps too quickly to memorization or to dealing with large numbers too quickly. • Concepts (such as right angles are quickly mentioned then applied). Not deep concept development. • Much of material does not align & is not useful.
4	These materials were well-organized, went "deep" into math concepts and provided a nice balance between teacher-directed instruction and student directed exploration. The lessons were sequenced well and aligned well with WA's new standards.
4	• 4.1.B: No evidence of identifying factors or multiples. • 4.1.I: Evidence for word problems are inconsistent and few are multi-step. Standard not developed. • 4.1.J: Most are multi Word problems – Found very few division ; not enough for mastery. • 4.2.F: Students not shown how to figure out equivalent fractions except by using Cuisenaire Rods. • 4.2.H: Only shown from 0 ➔ 1 on a number line. • 4.3.A: Briefly mentioned – transformations are evident but never linked back again to congruence. • 4.4.B: Only 1 lesson each on converting length – no time mentioned – no word problems. • 4.4.F: For this grade level, "likelihood" is all that is needed and that is not covered.
4	I did not find any indexes. Indexes are every important elements of an effective math program.
5	Indexes are not present.
5	• 5.3.I: No multi-step or triangle problems • 5.5.B: Mean is mentioned in assessment but no lesson given. • 5.6: In this section, some processes are mentioned and asked during the lessons but none are specifically taught or students given an opportunity to do it on their own to show mastery. Citation was for the whole program, not specific to LO.
5	Limited practice after topic introduced through activity.

2.18 Math Thematics – Grades 6-8

Grade	Reviewer Comments
6	• 6.1.B: Did not see multiplication represented with a number line. • 6.1.D: Explain inverse relationships between x/÷ not found/sufficient. • 6.3.C: Examples given for % visual model – but students are not asked to use vision model or interpret visual model. • *Conceptual introduction of skill often given as an example, however, student sense making of the conceptual explanation is not explored.

7	• 7.1.F: (a) No "described a problem situation that corresponds to a given equation". (b) Only 2 two-step equations from problem situations. • 7.6.A-H: The only concern is that problem situations cited are "stand alone" and intense, and might easily be skipped. There is not cited embedded reasoning…
7	• Module Projects presented ample opportunities to practice reasoning, problem solving, and communication of mathematics. • The curriculum was weak in relating proportionality, similarity, and direct variation represented in graphs, tables, and equations. One other weakness -- 7.3.C describing the effect of a change in scale factor or other attributes. • Many other standards had strong alignment and practice but limited constructivism of math concepts.
8	Interesting module projects throughout the series. Great for applying math skills developed and communicating math learned.
8	The organization of the modules seems confusing to me – it doesn't appear to give students focused time to master standards.

2.19 Math Trailblazers – Grades K-5

Grade	Reviewer Comments
K	• Without an index, it is very difficult to locate where some topics are mentioned or taught. The references given by the publisher did not always match the standard. • If there are materials for interventions, gifted or ELL, it was not easily found.
K	Ongoing Content: • Daily Calendar component ➔ o Centipede – count on, multiples of 5, 10 o Hundred and ten frame - # relationships o Monthly calendar - # and patterns o Weather graph o Calendar activities (100^{th} day) o Letters home in English and Spanish • Problem solving ➔ CGI problem types recommended. • Data collection • Counting Connections – counting boxes (workmats and objects), counting bags, # books (dot patterns, ten frames). • Assessment ➔ Observational Assessment record for each month. • Many of the lessons cited by the publisher do not match our performance expectations.

K	• No index • No technology • Many of the student tools in the blackline masters are too small for developing finger coordination, even if they were laminated at the beginning of the school year. • The teacher implementation guide is copyright protected, yet the pages are torn out? • Poor quality graphics – may not be important for curriculum, but for engagement of students and teachers. Students this age respond to visual, and their learning ability can be affected in the beginning. • Huge gap in equity and access, having some materials in Spanish does not resolve this issue. A gifted teacher will do this automatically, but teachers begin using a new curriculum at different ability levels.
1	• Too much reliance on calculator use. Students may not develop fluency in number sense and other mathematical concepts. • Lessons are often confusing and difficult to navigate. • There are a number of comprehensive problems to solve by students that also integrate science which are quite impressive should the teacher choose to set up. (i.e. URG 6-2) • Publisher claims that problem-solving strategies are built in to the lessons, not spelled out.
1	• This series needs a much better "road map" of lesson plans and where things are! It was like a scavenger hunt to find some things. Some standards are very subtly embedded in other lessons. There seems to be some weakness for practice cd recall of basic facts. • The Publisher's guide to standards match with the text is way off! • There is a lot material and concepts embedded within this set of books.
2	The Publisher's guide to the standards was all over the place – sometimes correct and sometimes not even close! My evaluation required considerable digging and comparing to find the needed information.
2	1. Letters home to parents are too lengthy! 2. Good practice opportunities available for students related to telling time. 3. As noted in Publisher Comments, problem solving is permeated throughout the curriculum. 4. This is practiced throughout all units. 5. Looked in 1st, 2nd, 3rd grade curriculum could only find a one sentence example to 1000. 6. There are examples of this to 100-200, not 1000. 7. Too few examples. 8. Too few examples.
2	This program is challenging to follow.
3	• 3.1.A: Publisher-cited incorrect lessons for this Performance Expectation. • 3.6: Publisher cited all processes are "not a distinct topic but permeates the entire program." I cited units, lessons where I found either the performance Expectation or portions thereof – Had I had the time to completely investigate all 20 Resource Guides, I may have found more documentation of evidence that the processes are explicitly taught/mastered. The Publisher needed to cite their work for efficiency.

3	• Publisher citations did not always match the standard.
	  o 3.1.A: Publisher cites 1.1 yet it is a Key Concept for 6.2.
	  o 3.4.A: Publisher cites 8.2 for parallel yet it is a Key Concept for 18.2
	• Teaching a performance expectation of identifying and sketching perpendicular lines cannot be met when students are asked to place a ruler perpendicular to the axis to help find appropriate coordinates.
	• Many of the measurement/geometry expectations were in grade level above.

3	The intent of these materials seems to be to provide a hands-on, inquiry-based program. Trailblazers definitely challenges students and guides them towards meeting many of the standards. It does not seem to promote the inquiry and discourse intended by the publishers, or it is very teacher-directed compared to some other programs. The strength of Trailblazers is that a new teacher can use it as is and be fairly successful and experienced teachers can deviate (by creating more open opportunity) and still show fidelity to the program.
4	• 4.2.I: The Trailblazers text does not support word problems that involve comparisons of decimals and fractions with verification of reasonableness. • 4.3.A: Publisher cited Resource Guide/Lessons that do not attend the Performance Expectation of congruence (Found in 5^{th} grade series). • 4.3.B: Publisher cited Resource Guide/Lessons that do not attend the Performance Expectation of approximate area in square unit. • 4.3.E: Publisher cited Resource Guide/Lessons that do not attend the Performance Expectation of fixed perimeter/fixed area. • 4.3.F: The Resource Guide/Lesson cited is correct, however is not complete nor rigorous enough to reach any level of residual learning or enduring understanding. • 4.4.C: Publisher cited this Performance Expectation is delivered in grade 2 – too low for scoring in 4^{th} grade criteria. • 4.4.B: The lesson cited is not enough to meet at least 50% met criteria. • 4.4: The Resource Guide/Lessons cited by Publisher do not align to the Performance Expectation attending to graphing points/identifying points using ordered pair. • 4.5: Core Process – The Publisher did not effectively cite evidence for each performance Expectation. Therefore a score of "1" for at least 50% was accredited. Had I had enough time to dedicate to only 1 publisher, I may have found more evidence. If the cited evidence did not support the Performance Expectation, then a "0" for insufficient evidence was awarded.
4	This program meets many of the standards and partially meets the rest, with only a few holes of no evidence. The newest edition of the Unit Resource Guide is very busy visually, and text-laden. The workbook pages have little room for students to respond completely and verify answers. While it has very strong points, it limits open discourse despite the philosophy it claims to embrace.

4	• Student Guide (SG) Unit 9 is volume, angles, lines and solids – no longer a 4th grade standard. • Area and Perimeter – Formula is not taught. • 4.4.D: None of the Publisher citations match. • 4.3.A: Congruence is not in 4th grade curriculum. • 4.4.C: Elapsed time problems are in Daily Practice Problems – Publisher cited Grade 2, the examples don't refer to an analog or digital clock. • 4.5: All these standards appear to be embedded.
4	No double-digit multiplication.
5	Lots of basic facts practice and lots of text in Student Guide.
5	• This program has great Daily Practice Problems. • I liked the pages written for students on evidence of meeting objective. • I wish this had more, specific suggestions for differentiation. • Some indexed citations (ex. -symmetry – unit 10 – led only to Escher's tessellations – seemed too large a stretch).
5	• 5.1.C: The curriculum refers to the standard long-division algorithm as pencil-and-paper or the forgiving method which is a partial quotient method that pulls out tens – students are not taught the standard algorithm. • Unit 14 is not a 5th grade standard. • Unit 15 is not a 4th grade standard. • 5.3.E and 5.3.F include triangles <u>but</u> not parallelograms. • 5.2.A and 5.2.B – limited adding/subtraction place value models. • Multiplying decimals is not a 5th grade standard.
5	The Publisher provided an inaccurate and weak standard correlation document, making the task of alignment a bit more challenging. The indexes were helpful, but often were found to be missing references to the text where content was aligned. Because of both of these issues, the alignment process was a much more difficult task and may not be as comprehensive as it could if these issues were resolved prior to the alignment to the standards.
5	• 5.1.E: 259- Students are asked to explain their answer after making an estimation. • 5.6.A-C: Problems tell students the question to be answered. There is no need for them to determine.

2.20 Mathscape – Grades 6-8

Grade	Reviewer Comments
6	• 6.1.H: Story problems have no depth. Does not ask students to represent their thinking or answers or to verify them in any way. • 6.2.B: Skill present but not a lot of depth. • 6.3.D: Curriculum doesn't always include verification of answers.
6	• Did not include assessment materials in review materials. • Materials are extremely constructivist not enough explicit instruction or practice for mastery. • Might be a good supplement to something that was algorithmically based.

7	• 7.4 D: No interpretation or construct of graphs: leaf stem, histogram. • 7.4 B: Mentions 2 types of probability, but very weak on usage. • 7.4 C: Looks at central tendency, but doesn't include variability and evaluation.
6-7	• 6.2: Numbers are very friendly – don't work with "messy" numbers. • Student book is available as consolidated version or individual units. This may be helpful when using concepts from other grade levels.
7	7.1 A: Students are asked to make comparisons with rational numbers, however not using the number line, and the symbols <, >, or =, except on limited homework problems. Also, limited comparing fractions. Possibly developed in Grade 6, but not referenced. Overall, good program for problem solving.
7-8	• The program was provided with a Quick Review Math Handbook, Hot Words (terminology) was referenced by the student materials, but the content in Hot Topics was not. • There is a mismatch between the math content and investigations, where the content is targeting appropriate grade levels, but the investigations are frequently not relevant to the grade 7-8 age level. Many examples are very childish and off-putting to this age. • Algebra development and practice is insufficient. Program uses only concrete/manipulative methods and justification, and doesn't relate algebra to the underlying mathematics. • There are insufficient problems for algebraic operations and problem solving mastery. • Program doesn't provide sufficient tools for either the student or the teacher to connect underlying mathematical concepts. • Excess content not related to the mathematics makes projects more engaging but distracts from and dilutes the learning of important math. • Student examples include below-grade-level workmanship examples with misspelling of words, etc.
8	• 8.3.C: No use of trend line included on scatter plot. • 8.3.G: Some problem solving, no counting, Venn Diagrams or verification. • 8.4.D: Only a discuss w/ students is to take place – no work with irrational numbers so students know what to expect.
8	Manipulatives reinforce the abstract with a concrete model. These do not appear to be intuitive – there must be some initial training of the use of mats, bars, and overall use.
8	• This curriculum is basically 8th Grade Math Lite. There is little rigor or in-depth development of more of the grade 8 PEs reviewed. Heavy calculator dependence is encouraged. It's more like a survey course of (some) 8th grade topics. • The assessment part of the product was not submitted for review and is thus reflected in the assessment review.

2.21 McDougal Littell Math Course – Grades 6-8

Grade	Reviewer Comments
6	• Very traditional text. • Problem solving embedded throughout the curriculum; however limited in process skills. • Limited conceptual development of surface area and volume (6.4).
6	• 6.1.B: There are few models shown for multiplication and division of non-negative fractions and multiplication of decimals. I was not able to find evidence of any area or number line models for division of fractions. I wasn't able to find evidence which provided student with the opportunity to create and master any of these model representations. • 6.4.D: Although lesson 10.6 gives a net example for a rectangular prism, students are given very limited opportunities to recognize or draw nets. I found no opportunities for students to draw nets from 3-dimensional figures that aren't rectangular prisms.
7	• Traditional text. • Very little conceptual learning experiences.
7	• 7.1.A: I believe the intent of this standard is for students to show ordinal understanding of all rational numbers. Examples in this program to create ordered lists of numbers within specific categories of rational numbers i.e. compare fractions or compare decimals. I found only two brief opportunities to compare amongst the variety of types of rational numbers. I was not able to find evidence which asked students to graph rational numbers in a specific order on a number line. • 7.2.E: Although lessons 7.7 and 7.8 have extensive exposure to functions using questions, tables and graphs; the proportional relationship of a linear function is only briefly shown as an extension of the lessons – thus providing insufficient evidence of this particular performance expectation.
7-8	• Very comprehensive program with materials to expend each lesson. • There are units that are available but are not part of the standards. It will be very important for teachers to not just teach from the book as it would be difficult to teach 13 units well in 180 days. Aligning the curriculum to the standards would be work that would need to be completed either by the curriculum department or teachers in professional learning communities.
8	• 8.1.G: The intent of this standard is for students to determine whether a function is linear or not according to a verbal description, table, graph, or symbolic representation. Although Chapter 11 is devoted to developing understanding of multiple functions, it only briefly gives students the opportunity to differentiate between a linear and non linear function p. 598 (example) p. 600 (student practice). • 8.2.C: Only half of lesson #8.2 is devoted to the concept of the sum of the 3 angles in a triangle = 180 degrees and students have a brief amount of practice offered. The second part of this standard regarding applications to other polygons is not addressed.

8	• Topics introduced in "procedural" manner with examples. • Problem solving often indicates to student exactly which strategy to use. • Overall alignment is pretty strong with few holes; however, the practice is often limited, routine and procedural. Problem solving is rarely open-ended or rich in context.

2.22 McDougal Littell Pre-/Algebra 1 – Grades 7-8

Grade	Reviewer Comments
7	7.6.A: All examples given gave the students the questions to be answered.
7-8	• Many resources available for teachers – could be overwhelming when trying to put together a balanced program. • "Concept Activities" or "Learning investigations" are optional lessons to teach conceptually. • Daily warm ups and homework quiz transparencies available. • Each chapter has a "Why?" section where it shows the real-life connection and what problems to look for.
8	This is an authentic algebraic curriculum with excellent development of various problem solving strategies, scaled problem sets (tiered difficulty), extensive remediation support, and excellent lesson plan/development resources. A student successfully completing this course/material would be well prepared to continue in mathematics. There are many investigations to both connect and enhance the material being studied. The three non compliant PE's dealing with angles are covered in the Grade 7 text.
8	Difficult to review using 8th grade standards.
8	Very strong content, weak in geometry concepts because it is an algebra textbook.
8	• 8.5.A-H: Reasoning, problem solving and communication focus through problem solving portion of "exercises" giving daily (possible) practice. SEE page T58. • Chapters 8-10, 12 don't contain WA grade 8 standards.

2.23 Prentice Hall Mathematics – Grades 6-8

Grade	Reviewer Comments
6	• A competent, mostly rigorous curriculum. I was disappointed to find the "flip and multiply" equivalence rule for fraction division given without mathematical explanation/derivation. • A few exploration activities encouraging some conjecture before proceeding would round out this product. • Excellent and varied array of teacher resources to choose from, supporting a broad spectrum of teaching styles. • One caution would be against overuse of calculators. There is a propensity in a number of places to use them for convenience, where manual computation is not difficult and would reinforce skills.
6	A few hands on labs but not much exploration to construct meaning.
6	Skills Review and additional practice worksheets available.

7	• Problem solving strategies introduced w/specific problems but no opportunity for students to make their own decisions re: which strategy to use. • 7.4.C: Nothing on variability or evaluation and suitability. • 7.3.C: Change in scale factor 8th grade. • Materials available in Spanish, vocabulary in other languages.
7	• 7.1: There are limited practice opportunities even taking into account the supplemental materials. • 7.2.A: Mental aspect appears missing. Sporadically found in V Skills. You'll need some mental math. • Problems presented throughout lack rigor. Most are simple step solutions. • 7.6: Guided Problem Solving throughout the book. How to determine questions is labeled for student. "Think it Through" requires the student to respond, but the level of rigor throughout varies. • 7.6.G: Charts and graphs throughout. Students are not asked to interpret or justify reasoning except in a few instances. The rigor of the questions limits student responses. • On-line video tutor available.
7	• Strongest areas in 7.1 rational # and equations and 7.4 data. Weakest areas in 7.3 geometry. Middle 7.2 proportionality. • Well organized curriculum, great electronic resources. • Tends to be direct instruction/guided practice, weaker in building conceptual understanding and high level problem solving (reasoning and communication).
8	• This book covers content, but seems very surface/easy. • The "extended response" test items aren't what I consider to be extended response. They seem to be more like short answer. • I found very little that really encourages/promotes student thinking.
8	• 8.1.E: The opportunity to graph slope and y-intercept is available through the given problems. The text just doesn't ask them to. • 8.5: Guided Problem solving throughout, the rigor of questions presented is questionable. Most are single step. • "Think it Through" provides students the opportunity to explain their understanding of a concept. Occasionally they explain the process – this is limited though because there are very few multi-step problems. • Problem solving handbook lists a variety of strategies that could be used. A limited number of practice problems show up on each example page.
8	• This program demonstrates an excellent balance of conceptual and procedural mathematics. Concepts are developed and related using a combination of visual and graphical and mathematical models, and the resulting math relationships are also presented explicitly in the student text. • Well-developed scope and sequence. • Additional supplementation may be justified in the probability and statistics section.

2.24 Progress in Mathematics – Grades K-6

Grade	Reviewer Comments
K	This program relied heavily upon the student text and workbook. Most performance expectations were only covered in 1 lesson with 1 page for "Let's learn" and 1 page for "Practice". There isn't an emphasis on hands-on activities or student discourse, Lessons are teacher lead.
K	• Significant emphasis on paper/pencil opportunities to practice concepts, skills, much less emphasis on hands on opportunities to develop concepts. • Concept building using manipulatives very quickly moves to representational; reinforcement and diagnostic re-teaching opportunities appear more age appropriate for the "typical' Kindergartener. • Primarily teacher directed; freedom for exploration, manipulatives; creation for students is very limited. • Online resources cited. • No self-assessment tools evident. • Assessments appear to be age inappropriate - primarily paper pencil. • Reference to "Spanish" online doesn't indicate "what" is available. • Requested student responses are often age inappropriate. • Concept building is limited.
K	Publisher's citations appeared in some cases to be cut off in text box. When that was apparent, the TE index was referenced to complete the review.
1	The set of materials provided minimal amounts of hands-on activities for students and relied very heavily upon a student text and student workbook. Conceptual understanding isn't truly developed. Many lessons/PE's were covered with just 2 pages in a text. Many topics were covered that are inappropriate for 1st grade (not in our standards at this level), such as range, mode, median, and double digit addition and subtraction with regrouping.
1	• This program included many topics, but few in depth. Conceptual development was minimal prior to focus on procedure in each strand. Use of manipulatives was very limited, often 1 or 2 experiences along with workbook page (e.g. followed along page with their cubes, what to do w/cubes given). • Measurement objectives used standard measurement with most work being pictures in workbook. There were few opportunities for students to measure anything other than pictures on page.
1	No evidence of self assessment opportunities. Assessments appear to be time intensive if performance components are used in addition to paper and pencil options. Clearer formative and summative assessment opportunities needed. Additional languages not obviously evident. Materials not always age appropriate when focus is on paper/pencil. Opportunities to think about their thinking seem buried or limited. Evidence of multi-step problems isn't obvious.

2	• 2.2.G: Many examples of missing addends (5 + □ = 8); however, the equations all tend to be with only 3 addend with the = sign in the same position each time (ex: no examples like 8+3=□+6) • 2.2.B: Little to no explicit teaching of the language of the word problems to help students determine if it is addition, subtraction, comparison. • 2.2.D: Only one page on mental math for both + and – and only adding or subtracting a 2-digit number to multiple of 10. • Comment on form sent in by Publisher: On several of the items, the form was incorrect. The reference pages from one expectation went into the next expectation box, and then nothing was written in for the next expectation (See 2.4.A and B for example). • 2.4.B: Very little on pictographs/bar graphs (one lesson each). • Teacher background math information given for each chapter is very limited.
2	• Technology sources were mentioned in the Teachers Edition but weren't available for review. • No materials were provided to show at home letters or if materials are available in a variety of languages.
2	Materials addressed many topics but in very little depth on most. Very few to no opportunities for students to model or explain. There were several story problems but very few problem solving opportunities where students made sense of problem and solved without step by step teacher direction. Little to no opportunities for explaining problem solving strategies were apparent.
3	• Inadequate use of manipulatives. • Concrete conceptualization is often reserved only for those who need re-teaching. • Teaches a 4-step process (procedure) for problem solving and students use it in every chapter.
3	Because of the breadth and scope of this curriculum, many of the 3rd grade performance expectations weakly addressed and provide limited opportunities for students to develop conceptual understanding prior to engaging in procedural fluency-building activities.
3	• Well-organized easy-to-follow program. • Includes suggestions for ELL and differentiation for learner needs in each chapter. • Minimal use of manipulatives for student practice. • Tends to provide more "pencil-paper" experiences than "hands-on" experiences w/manipulatives and tools. • Includes an online textbook. • Includes a CD-Rom that generates problems & assessments. • Has a range of assessment—pre/post summative, formative. • Color-coded TE is easy to follow & understand. • Pacing plan clearly outlined for each chapter. • Student text #'s coordinate w/teachers text #'s.
3	These materials provide teachers with suggestions to provide contextual and "open ended" problems but the majority is procedural in nature.
4	The materials provided multiple opportunities to practice procedural mathematics. Even the problem-solving became procedural as students are taught which strategy to use to solve problems. Depth is lacking throughout but practice of procedures is ample.

4	• Because of the breadth of this program and the fact that it spans a lot of content over the year, students may not get opportunity to develop a depth of understanding in the core and additional content areas. • A greater emphasis appears to be placed on procedural fluency than on conceptual development. In areas of the core content in Grade 4, not enough time is spent developing a depth of knowledge and sufficient time for practice. • The program does contain a strong thread of problem solving and procedures that are integrated systematically. This is a definite strength of the curricula.
5	This program is strong on some content but lacks depth in the area of geometry, measurement and algebra. The lessons provide little in the area of communication and reasoning, verification and justification. Often the teacher points out the visual models but students aren't given opportunity to represent problems visually. Problems do support frequent practice in procedures.
5	I wish I could have the opportunity to try the e-book.
6	• Progress in Mathematics is a very traditional approach to teaching math. • Although many of the standards are included in the program, the tasks will not lead to conceptual development of core content. Progress in Mathematics also lacks in practice or reinforcement of many of the standards. • Most of the reasoning and problem solving type questions don't require higher level thinking from students. • 6.6.A-G: 50% met lacking in higher level thinking. Students aren't being asked to process in order to solve.

2.25 Saxon Math (Elem) – Grades K-5

Grade	Reviewer Comments
K	• Saxon has made a considerable effort to address ELL with their glossary of terms in the back for both English and Spanish and their English language learner handbook. Since this is Harcourt Publishers perhaps this could be purchased separately by schools. • Publisher's list for K.1.E doesn't match well on Higher #s >20 • This program relies too heavily on programmed learning and teaching. It spirals more than needed. The Reasoning, Problem Solving and Communication seemed weak!
K	• The methods for teaching seem to be aimed at pre-schoolers, yet the curriculum seems to be 1st grade. • Disorganized, difficult to follow.
K	Lesson 5 – 'Pictograph' is used in a manner inconsistent with WA State Standards.

1	• 1.1.D: Lesson 65-2 further develops identifying ordinal numbers to 26^{th}. • 1.4.F: Calendars, days of week, months of year is covered in a daily activities at the beginning of each lesson in "The Meeting" which by repetition helps develop long term mastery. • 1.1.A: At the beginning of most daily lessons, students practice counting aloud form 1-100 and count forward/backward by even (0-20) odd (1-21), 5's to 50, 100's-1000. 10's to 100 – thorough development of number sense. • 1.2.H: The Publisher provided numerous "Problem-Solving worksheets" in the student workbook to allow students to solve and create word problems. • 1.3.A-C: 2D/3D geometric shapes, cones, cubes, spheres, cylinders, rectangular prism, pentagon, circle, square parallelograms, 4 and 5 sided polygons, triangles, hexagons. In addition, the Daily Activity requires students to identify shapes on the calendar and the shape pattern for the month. • 1.6.A-H: Problem-Solving and Reasoning Skills are developed at end of most overviews and student worksheets – Students learn to apply the 4-step Problem-Solving Process.
1	• Learning Palette activity cards were references but not provided. • While reasoning problem solving and communication are in place in the program, it's too scripted by teacher most of the time. I wonder whether students can do it independently.
1	1. Insufficient - Couldn't find up to 1,000. 2. Not up to 120. 3. Not enough hard examples. 4. Not enough hard examples. 5. Problem solving is integrated in all lessons, records numbers are examples. 6. Not enough examples. 7. Not enough examples. 8. Not enough examples. 9. Not enough examples. 10. Not enough examples. 11. The curriculum was very difficult to navigate. 12. Technology was on computer—couldn't review.
1	• In graphing, few lessons having the students come up with questions on their graphs. • 1.2.B: = sign only used in traditional position ➔ 8+3=11; not used with equivalent expressions : 8+3=5+6 or even 11=8+3. • 1.2.A: Physical and pictorial representations are discontinued after beginning lessons of program. • Extensive work on extending patterns, but I couldn't find evidence of creation of number patterns. • 1.4.A: There is just a brief mention of the fact that the unit must stay consistent in measurement when the teacher says she can use her feet, but to measure across the room because both feet are the same size. The students have to measure using all big paper clips or all small paper clips, but no mention of how inaccurate the measuring is if they use some small and some big paper clips to measure an object.

2	• 2.1.A: Students learned to count forward/backward to 1000 by hundreds in Gr. 1. • 2.1.B: This performance expectation is incorporated during a daily activity called Secret Number Activity; provides repetition which enables student mastery of number sense and place value. • 2.2.I: Students learn to read/write money amounts to $10. Money was introduced to students in Saxon Math 1. • 2.2.I/H: "The Meeting" incorporates a "money" daily activity to practice skills and reinforce learning concepts. • 2.3.D/E: "The Meeting" incorporates a "Calendar" and "Clock" daily activity to practice and strengthen time and calendar measurement skills. • 2.5.A, B, D-G: Critical problem-solving and reasoning strategies are emphasized at the end of each "overview". Students use a 4-step problem-solving strategy to solve a variety of problems developed during the previous lessons.
2	Note: lessons 17 'pictograph' is used in a manner not consistent with WA State Standards.
2	A lot of money, calendar, time, and pattern standards are met by doing the activities in the morning meetings.
3	3.2.G: This Performance Expectation is not in the text (not even the index).
3	• Concepts are spread out with practice sporadically throughout the year. I'm concerned there isn't enough in-depth practice initially to help kids retain the concept. Concept not taught in depth but breadth. • Problem Solving Skills are explained but students are never asked to choose which to use. • No models to show: 2-digit addition, when introducing division algorithm, when multiplying by 2, when introducing 2-digit subtraction. • Lesson range from adding 1 to square root. • 3.2.B: Only representation. Is fact family. • 3.2.F: Teaches directed/guided practice. • Students are very directed in everything to include guided practice. New concepts taught aren't given enough in-depth practice. • Excessive amount of content that isn't covered in 3rd grade.
3	• Seems disjointed – No 2 lessons develop a concept in a row for depth - they come back later to review. • I question the order they present multiplication- i.e. 1,10 1st followed by x7 – timings of x7 comes 2nd ; very early in the year. • Problem solving strategies are very prescriptive; doesn't allow a student to construct meaning. • Progressions of skills are questionable. One day they learn square root, the next day they are subtracting (9-1). • Way too worksheet heavy.
3	• The alignment paper provided was extremely difficult to read and follow. Some of the citations didn't even match the Performance Expectations. • Program doesn't include very much higher order processes.
3	• This program is weak in geometry for 3rd grade. • Problem solving is very evident until 3.6.I and 3.6.J.

3	This program doesn't allow students many opportunities to explore the concepts and "discover" why the math works; they just do the math in a fairly scripted lesson format that is repeated daily.
3	This program seems to meet many of the standards. But its spiraling format is very distracting and does not promote depth whereby only partially meeting standards. While there are learning center options, the main lessons are very direct and don't promote discourse or inquiry. The supplementary resource for intervention, ELL students and assessments are comprehensive and seem useful. The minimal use of common manipulatives like Base 10 place value blocks was very surprising (These are mentioned in Teacher Resource Manual but not demonstrated in any lessons). The Problem Solving Discussions component meets many PEs in 3.6 fully, but are very directed and leave little room for independent problem solving. PowerUp promotes quick recall in a routine manner for fact fluency.
4	4.3: Concept of Area – (Introduced in 4th Grade Standard). Students are introduced to area at the end of the 2nd volume, but are expected to compute area without having been taught the actual formula or how to do it long before they are given actual instruction.
4	• Many concepts are introduced and then practiced throughout with 1 or 2 questions. I would like to see more development time – to many obj./unit. • The teacher's manual is a bit hard to visualize the big ideas and how much time to devote. • Student manual could benefit from more appealing visual aids for motivation. • Very heavy on number sense – other concepts are not as dev.
4	This program partially meets all standards because it manages through a dizzying spiral, to touch on almost everything in the Math Standards and much more. All this it does with little depth and only providing inquiry - hands on opportunities as "alternatives". It has a strong computational component and problem solving component, which guides students toward effective strategies. Still it seems to be primarily teacher directed and leaves little room for mathematical discourse.
4	4.5: Problem Solving Discussion at the beginning of each section. Most "word" problems are single step.
5	• Seems that many word problems have advanced vocabulary and would be difficult for struggling readers. • Student text is uninteresting. • Moves through concepts too quickly. • Very procedural.
5	• 5.1.F: The PowerUp pages do quick lessons, usually mental math practice that spirals over time and occasionally includes 1 problem that meets this standard. • 5.1.E: PowerUp pages provide frequent practice for short periods of time throughout course. • 5.3.D: The alignment matrix defines the opportunity for the teacher, but doesn't fully develop nor extend the learning. • The text is highly spiraled and doesn't teach complete strands to mastery in single strand settings rather over the entirety of the course.
5	Strong evidence of 5.6 until 5.6.I and J – lacking.
5	Publishers alignment document is very difficult to use and inaccurate!

2.26 Saxon Math Intermediate (Middle) – Grades 6-8

Grade	Reviewer Comments
6	• 6.4.A: Given pgs. 89,90 (measuring with a ruler)?? (Supposed to be circumference and area of circle). Examples of the alignment document – many references not found. • 6.1.H: Given pgs. 65-66 (Place value supposed to be fractions/decimals) • Important words not found in index.
6	Curriculum sometimes gives a conceptual example but never seems to ask students to make sense of the mathematics or to relate concepts to each other. Practice seems strictly computational and many examples are given as algorithms to perform without understanding. Practice is minimal and scattered throughout the spiral.
6	• 6.3.F: Saxon does a nice job in Lesson 4 helping students make the connection to the ratio of the circumference of the diameter of a circle as the constant π. The exploration brings the students to the understanding that the ratio = 3 1/7. Although the ratio 22/7 isn't explicit in this lesson, there is at least one other reference relating π to 22/7 later in the text p.262. • Problem solving: 6.6.C and F: I am very impressed with the multitude of lessons throughout the text on teaching problem solving strategies. I wasn't able to find rich open ended problems which encouraged students to choose from the strategies they had been exposed to.
7	Great Power-Up activities for building mental math and problem solving strategies.
7	Program Summary: • Many standards for Grade 7 weren't found or briefly developed (for example- 7.2.F: finding slope and relating it to proportional relationships or representing proportional relationships using graphs, tables, and equations and making connections among representations, etc…) • Word problems weren't rich contextually—they often told students which strategy to use to get the answer and didn't ask the student to verify their answer or solve it in another way. • Even when a topic was introduced with multiple examples—students only practiced 4-6 problems and then did not see the topic again for several days (and when followed up- they only had 1-2 more problems at a time).
7	Integers must be taught at grade 6 based on problems in grade 7 questions.
8	For me, the order of lessons, broken apart throughout the book, made it difficult to review and especially to determine the level of practice provided.
8	• This curriculum is very rigorous and thorough in its development and presentation of concepts. It does a good job of preparing students for success in authentic algebra. However it has some holes with respect to the standards. Little is done with respect to sampling methods or discussions of bias. There is also little emphasis on estimation and triangle angles sums isn't related to polygons. In addition, a few investigations where students are taught to conjecture and compare their results with their conjecture would serve to make more of the learning student-centered. • There are amazing mental math exercises and nice, teacher-directed activities to introduce and reinforce concepts.

2.27 Singapore Math Standards – Grades K-5

Grade	Reviewer Comments
K	• I wish Textbook KB and activity books were provided. • Different computational strategies were mentioned but not different problem solving strategies.
K	• K.1.A: Nice development of counting to 10, but counting on to 100 is not practiced. • K.1.E: Did not find evidence of counting out a given number of objects from a larger set of objects. • Children have limited use of concrete materials in lessons. This program relies heavily on workbook. Discussion and development of mathematical ideas by children not addressed in teacher plan.
K	Relies heavily upon student textbook. Very limited lessons to practice/master skills. Very limited use of hands – on materials. Does not promote student discourse not having students explain their work.
K	• Square is never presented as a "special kind of rectangle". • Students are never required to explain a sorting rule for sorting shapes. • Out of 16 content performance expectations, only 5 were addressed through the first ½ of this program. • For subtraction, there is a large emphasis on part-part whole rather than separating. • Students are not counting to 100 by 1's – only by 5's and 10's. • (K.1.C) very little emphasis on decomposition of numbers to 5. • Number lines not used in program.
K	• Some lessons need to go into more depth to ensure all students have achieved the understanding. • Was unable to find any mention of assessments.
1	• Student workbook 1A; Extra Practices and Tests (1A, 1B) are not provided ➔ Harder to see the whole picture e.g. have a harder time answering questions in assessment because I don't have the "Test" book. • Number does not go to 120, it goes to 100. • Almost no real world application. • There is no index in Teacher's Guide. • There are math problems but it is a challenge to find evidence to support the core processes. The appendix pages provided are not sufficient evidences. • I did not see "rubric".

1	• Focus is skill building, conceptual understanding; application is limited. • Few tasks with multiple solutions; options for open ended thinking; student discourse. • No evidence of technology. • No index in the TG! • Little evidence of non routine problems or real world problems. • Teacher directed lessons; little evidence of opportunity for student discourse or thinking. • No evidence of multi-step problems. • Little evidence of connecting disciplines to real world contexts. • Limited reference to "misconceptions" • Assessments unavailable for review; no evidence of "self assessments", no mention of formative, summative, or diagnostic in TG. • No evidence in TG of differentiation opportunities for any group; no evidence of intervention strategies. • No references to "multiple languages" or to parent support in TG.
1	Very little use of hands-on manipulatives to build conceptual understanding. Even 3-D geometry was taught using workbook (2D) pages.
1	Students only taught to view numbers as tens and ones in one way (82=8 tens, 2 ones – never 7 tens 12 ones).
2	• Limited student discourse and explaining. • Limited hands on activities. • Limited practice of skills.
2	• No index. • No mention of technology. • Problems are "routine"; little or no evidence of "non-routine" problems. • Illustrations for problems are cartoons. • Lack of consistent reference to appendices. • Little opportunity for students to think about their thinking; most TG directions "tell" the students how to solve problems. • No evidence of multi-step problems in student work; little evidence in TG directing students to solve multi-step problems. • No connection to other disciplines; math topics are not connected. • No assessment materials provided; TG did not reference rubrics; difficult to address without materials. • No additional suggestions or materials offered for any kind of differentiation i.e. disabilities, ELL, gifted. • No evidence of parent support. Materials available but not provided? • No opportunity to review student workbook.

2	• 2.1.C: This is shown with models, but the students are not asked to identify the digits in isolation. • 2.1.E: Numbers are renamed in one additional way only. • 2.2.B: Focus for word problems is on part-part whole. Very little discussion around verification of solutions. • 2.3.C-D: Much practice on both of these skills, but very little as students explaining the strategies or why the procedure works. • 2.3.A: Approximations are mentioned (pg. 105) but not stressed in the lessons. • 2.3.E: Telling time taught in one day and just to the 5-minute intervals. • 2.4.C-D: Lots of modeling; little describing. • 2.5.A, B, C, G: Could not find where this was explicitly taught. • 2.5.F: Emphasis on explaining solutions, rather than how solved.
3	• Minimal amount of Teacher and Student materials. • Teachers Edition has minimal text and is easy to read. • Provided brief overview of "math behind math taught" before each new section of instruction. • Mostly teacher-directed and closely scripted with mostly "right answer" opportunities. • Manipulatives used mainly by teacher modeling. • Problem solving limited to "right answer" and many similar type problems.
3	• Gradual Release seems to be missing. • Teacher seems to model often with manipulatives. • Students don't seem to explore or practice or write to rehearse and think. • Very teacher directed.
3	• 3.1.E: Limited word problems, students are not asked to verify solutions. • p. 94-103: The division algorithm is taught very well with place value models. This is a standard for 5^{th} grade. • 3.2.H: Students are not asked to verify solutions, and a lack of problems. • 3.3.B-C: Teacher's guide - great teaching – but students are not given an opportunity to apply or practice. • Standard 3.6 – missing from curriculum (3.6:A – 3.6:J).
4	• Student workbook 4A was missing from materials presented as well as the test booklets and extra practice books. I was unable to use these resources on the alignment document, since they were not available. • The Publisher provided very limited examples of evidence for the process strands and the teacher's guide did not show evidence of mathematical processes being embedded in the content.
4	• This program has minimal teacher & student materials. • Many lessons provide a good first start at a concept; however do not go deep enough for mastery. Workbook/textbook pages provide minimal practice experiences. • Skills/concepts presented & practiced in small, digestible chunks. • Brief description of "math behind math being taught" at front of each chapter.

4	• Small chunks of teaching and learning followed by frequent formative assessment. Very limited practice or exploration. • Traditional work problems with one right answer and no explanation.
4	• Great deal of content which will mean it is imperative to take the Performance Expectations to Align Curriculum to ensure content is taught. • There are many lessons a teacher would not use. • Content not used is integrated in review problems and assessments.
5	• Program has minimal materials for teacher and student. • Program uses minimal amount of manipulatives. • Teacher materials are brief and easy to follow. • Skills and concepts are presented in small, digestible chunks. • Includes a brief overview of "math behind the math being taught" at the beginning of each chapter. • Program is heavily teacher-directed with little student choice. • Many lessons make a good "first run" at a concept, but do not dig deeper and never go to application. • Word problems present, however mostly single-step, one right answer. • Little opportunity for sharing strategies for problem solving.
5	This program provides instruction and practice in some content but almost no context, no real-world application and development of reasoning and process are absent.
5	• The curriculum publisher did not provide the student workbooks, tests, or extra practice. These materials were not included in this review. • There was little evidence of the core processes being embedded in the content