

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>AIMSweb TEN</p> <p>Publisher: Edformation Inc.</p> <ul style="list-style-type: none"> • Phone: (888) 944-1882 • Website: http://www.aimsweb.com <p>Purpose: Formative, Screening, progress monitoring</p> <p>Grade Levels: K-1</p> <p>Cost: \$99 for a school site license and \$39 for individual license for grades K-1 benchmark set, \$299 for a school site license and \$99 for individual license for the progress monitoring set.</p>	<ul style="list-style-type: none"> • AIMSweb TEN™ assessments are used to identify students at risk and monitor the progress of all students in Kindergarten and early Grade 1. • CBM system. 	<ul style="list-style-type: none"> • 1-minute individual paper/pencil and oral tests. 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> • Scoring is done by hand. Measures are brief (3-5 mins. per child). Raw scores are provided. Each of the four tests provides information about what the student can do in one minute. 	<p>Substantial evidence of technical adequacy.</p> <p>Parallel or alternate forms reliability: .78-.93 (fall, winter, spring)</p> <p>Inter-rater reliability: .98-.99 across the 4 subtests</p> <p>Test-retest reliability: .79-.85 at 13 weeks; .78-.86 at 26 weeks</p> <p>Content validity evidence: Based on indicators of later math success.</p> <p>Predictive validity: WJ-R applied problems correlations: Fall AIMSweb Ten with WJ-R Spring: OC = .72, NI = .72, QD = .79, MN = .72; Winter AIMSweb Ten with WJ-R Spring: OC = .68, NI = .68, QD = .79, MN = .71</p> <p>(Published study)</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY																				
<p>Assess2Know</p> <p>Publisher: Riverside Publishing</p> <ul style="list-style-type: none"> 3800 Golf Road, Suite 100 Rolling Meadows, IL 60008 Ph: (800) 323-9540 Fax: (630) 467-7192 http://www.riverpub.com/ <p>Published: 2007</p> <p>Purpose: Formative</p> <p>Grade Levels: 3-11</p> <p>Language: English only</p> <p>Cost for 2008: \$3.00 per student, range of \$5.25–\$7.00 per student with Edusoft Assessment Management System</p>	<ul style="list-style-type: none"> The Assess2Know Benchmark item bank lets educators construct tests that are aligned to the Washington Learning Standards. The Assess2Know Benchmark item bank allows districts and schools to create interim assessment programs that follow their district pacing guide or curricula, while being able to assess student mastery of the State Standards tested on the state’s summative assessments. The Mathematics item bank contains items for grades 3–11 aligned to Washington Standards. Districts can use the Edusoft® Assessment Management System, an online test generator, with this item bank to select the standards they want to assess on a particular test. After the items have been selected and the order of the items determined, a PDF or Word document of the form is created so that the assessment can be printed. Alternatively, the assessment can be administered online. 	<ul style="list-style-type: none"> Admin: Individual or group Time: Determined by test developer, dependent on number of items on each assessment Qualification: Teacher can develop and administer tests Online or on paper Assess2Know can be delivered via the Edusoft Assessment Management System or as a content solution using local scoring and reporting methods. 	<p>The <i>Assess2Know Benchmark</i> Mathematics item bank includes the following numbers of items that are aligned to the Washington State Learning Standards:</p> <table border="0"> <tr><td>Grade 3</td><td>611</td></tr> <tr><td>Grade 4</td><td>571</td></tr> <tr><td>Grade 5</td><td>705</td></tr> <tr><td>Grade 6</td><td>575</td></tr> <tr><td>Grade 7</td><td>967</td></tr> <tr><td>Grade 8</td><td>946</td></tr> <tr><td>Grade 9</td><td>551</td></tr> <tr><td>Grade 10</td><td>319</td></tr> <tr><td>Grade 11</td><td>685</td></tr> <tr><td>Total items</td><td>5,930</td></tr> </table> <p>All multiple-choice items in the item bank include a stem, correct answer, and three distractors. The stem and all options developed by our item specialists meet readability requirements for the grade level to which they are aligned.</p> <p>All constructed-response items are created with item-specific rubrics. The rubric for each constructed-response item has been developed to support accurate, unbiased, and consistent scoring.</p>	Grade 3	611	Grade 4	571	Grade 5	705	Grade 6	575	Grade 7	967	Grade 8	946	Grade 9	551	Grade 10	319	Grade 11	685	Total items	5,930	<p>Score reporting: Available reports, as delivered within the <i>Edusoft</i> system, include:</p> <ul style="list-style-type: none"> Performance Band Report Class List Report Student Performance Reports Report Builder School Comparison Reports Benchmark Exam Labels Item Analysis Item Response Report Intervention Groups Teacher Tools Test Results Teacher Tools Labels <p>Scores available in the <i>Edusoft</i> system include raw scores, grade equivalents, age equivalents, and percentiles. The Item Analysis Report lists reliability, validity, difficulty, and discrimination for entire test and per question.</p> <p>Alternate Forms: Unlimited—OSPI or teachers can create as many tests as desired.</p>	<p><i>No independent evidence of technical adequacy is available at this time.</i></p> <p>Publisher claims that, based on the same process used to develop high-stakes tests, instrument is reliable and valid. No details provided.</p> <p>Publisher claims that items are “...tightly aligned to the Washington State Learning Standards at the most granular level.”</p> <p>Bias and sensitivity reviews have been conducted.</p>
Grade 3	611																								
Grade 4	571																								
Grade 5	705																								
Grade 6	575																								
Grade 7	967																								
Grade 8	946																								
Grade 9	551																								
Grade 10	319																								
Grade 11	685																								
Total items	5,930																								

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Balanced Assessment in Mathematics</p> <p>Publisher: CTB/McGraw-Hill</p> <ul style="list-style-type: none"> Phone: (800) 538-9547 Website: http://www.ctb.com/mktg/balanced_math/overview.jsp <p>Purpose: Formative</p> <p>Grade Levels: 3-10</p> <p>Language: English only</p> <p>Cost: Test Books (pkg 25): \$77.40 Scoring Guides CD-ROM: \$193.00</p>	<ul style="list-style-type: none"> Measure mathematics achievement against international standards. Build on an existing system to develop a comprehensive mathematics assessment. Track student, school, and district progress. Guide school, classroom, and individual instruction to meet established goals. Use practice tests in instruction to introduce students to complex mathematics. Dynamic Test Structure: CTB/McGraw-Hill publishes two forms of the assessment per grade each year, which ensures new content and enables users to offer the tests alone or with existing programs. The forms provide maximum flexibility to cover standards within realistic time constraints. Requires students to show their reasoning: thus, makes connections with instructional needs. Scoring student responses provides excellent opportunities for staff development and training for teachers. Extensive Scoring Guide on CD-ROM is available for each form of test. Tasks are robust, engaging, authentic. Seven forms of tests/practice test for each grade level. Tasks are linked to NCTM standards. 	<ul style="list-style-type: none"> Paper/pencil Form A is a 40-minute test designed for use with other traditional tests. Form B, also 40 minutes, is designed for use with Form A. Together, the two create an 80-minute dynamic test that measures standards and provides a deeper insight into student achievement. Students write directly in test booklets, showing all work. Suggested time for completing each task is noted in test booklets. Tasks can be used as formative classroom performance activities, instead of viewed as tests. Involving students in scoring tasks leads to links with learning. 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning <p>Resource Guide provides matrix of tasks and NCTM standards assessed, plus other tools.</p>	<ul style="list-style-type: none"> Tasks are handscored using rubrics and sample papers applied by trained teachers. Scoring Guide on CD-ROM facilitates scoring and training for teachers. Scoring Guides for each form contain rubrics, task descriptions and ten student sample responses for each task that have been scored through a calibration process. Two test forms have cut scores and performance level descriptors. Rubrics are task-specific with core elements of performance identified; points assigned to aspects of performance. TestMate Clarity provides a PC-based platform for scanning, scoring, and reporting; 16 reports; aggregate group and summary data. 	<p><i>No evidence of technical adequacy is available at this time</i></p> <p>Tasks were developed by an panel of experts from US and England (Math Assessment Resource Service)</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Booker Profiles in Mathematics: Numeration and Computation</u></p> <p>Publisher: Australian Council for Educational Research Ltd.</p> <ul style="list-style-type: none"> http://www.acer.edu.au <p><u>Purpose:</u> Diagnostic</p> <p><u>Grade Levels:</u> Ages 7-16</p> <p><u>Cost:</u> Contact the publisher</p> <p>CRT</p>	<ul style="list-style-type: none"> “The Numeration and Computation assessment is intended to diagnose specific difficulties with computational understanding and skills” (Buros Review). Test questions identify strengths and weaknesses in mathematical concept knowledge. Items based on 15 years of experience studying students with learning difficulties in mathematics in Australia. The stated uses in the manual include: <ul style="list-style-type: none"> Classroom assessments in primary and secondary schools Analysis of individual student needs Information for determining appropriate career or study options Diagnosis of learning disabilities 	<ul style="list-style-type: none"> 45 minutes untimed with individual administration. The test administrator uses an easel with test questions and records student responses in the Response Record, there are also manipulative materials such as blocks and numeral cards that must be supplied by the user. Numeration: arranged into subsets identified as name, read, write, interpret, and process one-digit, six-digit, and seven-digit numbers. Computation: four sections: addition, subtraction, multiplication, and division with subsets identified as concept, basic number facts, algorithms, and problem solving. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> Numeration and Computation scores. Summary of Profile Results uses number of errors to produce the profile. Indication of strengths and weaknesses comes from the Summary of Profile Results. “Experience with the use of the Profiles appears to be associated with obtaining dependable and accurate results” (Buros Review). 	<p><i>No evidence of technical adequacy (Buros Review)</i></p> <p>There is also a “Problem Solving” profile (Buros indicates that the minimal technical data required for a review was not available).</p> <p>Information from initial field trial in 1990-1991 used to revise the tests in 1992.</p> <p>Criterion referenced, not norm referenced.</p> <p>Reliability of results from the profiles was not discussed in the manual.</p> <p>Content validity: “Although there is evidence in the manual of content validity, virtually no psychometric reliability and validity evidence is presented in the manual” (Buros review).</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Collis-Romberg Mathematical Problem Solving Profiles</u></p> <p>Publisher: The Australian Council for Educational Research Ltd.</p> <ul style="list-style-type: none"> http://www.acer.edu.au <p><u>Purpose:</u> Diagnostic</p> <p><u>Grade Levels:</u> 4-12</p> <p><u>Cost:</u> \$20.90 for the manual; \$66 for the complete set, including the manual and photocopy masters</p> <p>CRT</p>	<ul style="list-style-type: none"> Collis-Romberg Mathematical Problem-Solving Profiles, used either with individuals or groups from late primary to end of secondary school levels, will enable teachers to determine quickly and accurately a student's progress through a range of mathematical problem-solving skills. More importantly the information provided by the Profiles also includes advice on further teaching strategies for students based on their performance. 	<ul style="list-style-type: none"> Paper/pencil Two parallel forms. There is a “Junior” version (ages 9-13) and “Senior” version (ages 13-17). Group or individual administration 40 minutes for Junior, 50 minutes for Senior. This test is not timed. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input checked="" type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input checked="" type="checkbox"/> Measurement <input checked="" type="checkbox"/> Probability <input checked="" type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input checked="" type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> In addition to counting the number of correct responses, the administrator also classifies the responses into the tests “Structure of Observed Learning” (SOLO) taxonomy. The levels within the SOLO taxonomy are: a) unistructural, b) multistructural, c) relational, and d) extended abstract. Items on the test were adjusted following testing on the sample of 300. Profiles assessment items in five aspects of mathematics which form a foundation for problem solving in Algebra, Chance and Data, Measurement, Number and Space. 	<p><i>Little evidence of technical adequacy (Buros Review)</i></p> <p>No evidence of internal consistency, inter-rater, test-retest or alternate forms reliability is presented in the manual.</p> <p>Content validity: Judged by 20 Wisconsin school teachers and two indices of agreement among the teachers were calculated. This level of agreement: Ranging from .48 (Algebra) to .82 (Chance and Data), for cognitive levels was mostly in the .40s using a different taxonomy (Blooms?) other than the one provided by the test (SOLO).</p> <p>Guttman Scalogram analyses were conducted, results indicated that, “in general, the questions within the superitems appeared to form Guttman scales.</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Comprehensive Mathematical Abilities Test</u></p> <p>Publisher: Pro-ed</p> <ul style="list-style-type: none"> • Phone: (800) 897-3202 • http://www.proedinc.com <p><u>Purpose:</u> Screening</p> <p><u>Grade Levels:</u> 2-12</p> <p><u>Cost:</u> \$275</p>	<ul style="list-style-type: none"> • Used (a) to determine the strengths and weaknesses among developed mathematical abilities, (b) to identify students who are significantly below or above their peers in mathematical abilities, (c) to make predictions about students' future performance in mathematics, and (d) to serve as a measurement device in research studies investigating mathematics abilities. • Primarily a measure of computational proficiency 	<ul style="list-style-type: none"> • Paper/pencil, oral • Individual administration • Some items in a student response booklet, other items require students to view items included in a picture book. Takes approximately 45 minutes to 1 hour • Suggested that those who administer, score, and interpret the CMAT have some formal training in assessment. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input checked="" type="checkbox"/> Algebraic sense <input checked="" type="checkbox"/> Geometric sense <input checked="" type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input checked="" type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> • Computer scoring program is available and provides standard scores, percentile ranks, and age/grade equivalents. • Score reports for teachers • 1,625 students from 17 states included in normative sample 	<p><i>Substantial evidence of technical adequacy (Buros Review)</i></p> <p>Internal consistency: Cronbach's alpha = .70 -.95 for subtests; .87-.98 for composites across ages.</p> <p>Inter-rater reliability: .95-.99 for subtests, and .99 for Global Composite, N=50.</p> <p>Test-retest reliability: .86-.95 for subtests, and .99 for Composite (2-3 weeks).</p> <p>Content validity: Review for content and items against NCTM standards.</p> <p>Inadequate coverage of NCTM standards (Buros)</p> <p>Criterion validity: correlations with Diagnostic Achievement Test for Adolescents, 2nd Ed. = .60; the Woodcock-Johnson Psycho-Educational Battery, R = .83; the Stanford Achievement Test Series, 9th Ed. = .65. Correlations among the general Mathematics Composite of the CMAT with the above tests were .60, .83, .65, and .95 respectively</p> <p>Internal validity: intercorrelations = .25-.68.</p> <p>DIF reviews conducted</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Diagnostic Achievement Battery - 3 (DAB-3)</u></p> <p>Slosson Educational Publications, Inc.</p> <ul style="list-style-type: none"> PO Box 544 East Aurora, NY 14052 (716) 652-0930 (888) 756-7766 Fax: (800) 655-3840 http://www.slosson.com <p><u>Purpose:</u> Diagnostic, summative</p> <p><u>Grade Levels:</u> Ages 6-0 to 14-11</p> <p><u>Cost:</u> Test Kit (Manual, 25 Student Worksheets, 25 Profile/Answer Sheets, and 1 Student Booklet) \$295; 25 Student Worksheets \$47; 25 Profile-Answer Sheets \$67</p> <p>NRT</p>	<ul style="list-style-type: none"> A standardized, norm referenced achievement test. This popular achievement test provides a comprehensive assessment of academic abilities in 6- to 14-year-old students. It profiles strengths and weaknesses in the following areas: Listening, Speaking, Reading, Writing, and Mathematics. DAB-3 is particularly useful in identifying students for special education placement or remedial planning. The battery includes 14 subtests, all relevant to the assessment of learning disabilities: Story Comprehension, Capitalization, Characteristics, Punctuation, Synonyms, Spelling, Completion, Contextual Language, Alphabet/Word Knowledge, Math Reasoning, Reading Comprehension, Math Calculation, Story Construction, Analysis 	<ul style="list-style-type: none"> 90-120 minutes for administration. Oral and paper/pencil test. The administrator reads most of the test aloud to an individual child and simultaneously records responses on a profile/examiner record booklet. There is a separate student response booklet for capitalization and punctuation, spelling, contextual language, story construction, and calculations 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Basic computation skills <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> Standardized on more than 1,500 students, DAB-3 provides standard scores and percentiles for each subtest. By combining subtests, you can also generate various composite scores: Listening, Speaking, Reading, Writing, Mathematics, Spoken Language, Written Language, and Total Achievement. These are useful in determining the child's global strengths and weaknesses 14 subtest scores (story comprehension, characteristics, synonyms, grammatic completion, alphabet/word knowledge, reading comprehension, capitalization, punctuation, spelling, writing: contextual language, writing: story construction, mathematics reasoning, mathematics calculation, phonemic analysis) and 8 composite scores (listening, speaking, reading, writing, mathematics, spoken language, written language, total achievement). 	<p><i>Substantial evidence of technical adequacy</i></p> <p><i>In Buros Review recommended as an achievement measure but <u>not</u> for diagnostic purposes</i></p> <p>Internal consistency: full test = .98 to .99, subtests = .80-.90.</p> <p>No information for parallel/alternate forms, or inter-rater reliability.</p> <p>Test-retest: low .70s to high .90s; Composite = .83 for writing & .99 for listening.</p> <p>CFA supports both a one and four factor solution, the manual reports that they consider both to be equally viable.</p> <p>Content validity: Offered in the form of thorough explanations of the rationale and development process for items in the individual subtests.</p> <p>Criterion validity: Scores on the DAB-3 correlate moderately with their counterparts in the Stanford achievement test (9) at the subtest level and strongly at the total achievement level.</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Diagnostic Screening Test-Math 3rd Edition</p> <p>Publisher: Slosson</p> <ul style="list-style-type: none"> Phone: (888) 756-7766 http://www.slosson.com <p>Purpose: Screening</p> <p>Grade Levels: 1-12</p> <p>Cost: Diagnostic Screening Test-Math- 3rd Edition: \$79.50, (DSTM-2S25) Form A 25: \$22.50,(DSTM-3S25) Form B 25: \$22.50, (DSTM-4S) Manual: \$35.75 (1983).</p>	<ul style="list-style-type: none"> Intended use is as a quick assessment of student performance for classroom planning. Each item in this test taps a separate math concept with items divided into two testing divisions. The first is the Basic Processes Section, composed of 36 items arranged developmentally within four major areas. The Specialized Section utilizes 37 to 45 items to evaluate the student’s conceptual and computational skills in five areas commonly taught in most math programs. Developed in 1983, updated norms or items not available. 	<ul style="list-style-type: none"> Group and individual administration. Administration time: 5-20 minutes. Manual provides directions for administration. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Basic computation skills <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> Time to get scores is 2 minutes. Each area yields a separate Grade Equivalent Score and Consolidation Index Score. Nine supplemental areas are also scored in this basic section: Process, Sequencing, Simple Computation, Complex Computation, Special Manipulations, Use of Zero, Decimals, Simple Fractions, and Manipulation in Fractions. These scores yield diagnostically useful indicators for further investigation. Forms A and B available 	<p><i>No evidence of technical adequacy (Buros Review)</i></p> <p>Instrument best used for “rough screening” (Buros)</p> <p>Internal consistency, test-retest, inter-rater reliability not provided.</p> <p>Parallel/alternate forms: reliability data not provided.</p> <p>Face and construct validity are claimed to be obvious due to the manner in which the test is developed, according to the manual.</p> <p>Construct validity: Data to support construct validity not available. Item analysis procedures to determine difficulty were based on a limited sample; assessed by comparing DST grade equivalents with grade equivalents on the PIAT and KeyMath.</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>DOMA Revision 2 (Diagnostic Online Math Assessment)</u></p> <p>Publisher: Let's Go Learn</p> <ul style="list-style-type: none"> • Phone: (888) 618-7323 • http://www.letsgolearn.com <p><u>Purpose:</u> Formative, diagnostic, screening</p> <p><u>Grade Levels:</u> K-5</p> <p><u>Cost:</u> Unknown</p>	<ul style="list-style-type: none"> • DOMA Basic Math Skills assesses students' basic math skill abilities, including: • Number skills, from number recognition to calculations of fractions and decimals; Measurement skills, including time, money, units of measurement, capacity, area, etc. • The individual math profile generated for each student enables teachers to clearly identify specific math constructs in need of targeted instruction. DOMA's web-based platform allows for practical school or district-wide deployment of assessments that lead to dramatic math score improvement, as well as time and cost savings. DOMA Basic Math Skills is appropriate as a screening or diagnostic tool for students in grades K-5 and remedial math students. Individual student and classroom reports are instantly available for teachers and administrators to download, view or print. 	<ul style="list-style-type: none"> • Web delivered 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input checked="" type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> • Individual student and classroom reports are instantly available for teachers to download, view or print. 	<p><i>No evidence of technical adequacy is available at this time</i></p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Early Mathematics Diagnostic Assessment (EMDA)</p> <p>Publisher: Harcourt Assessment, Inc. (PsychCorp)</p> <ul style="list-style-type: none"> Phone: (800) 211-8378 http://www.harcourtassessment.com <p>Purpose: Screening, diagnostic</p> <p>Grade Levels: PreK-3</p> <p>Cost: As of 2003: \$110 per complete kit including examiners manual, stimulus book, 25 record forms, 25 response booklets, and 30 “thumbs up” worm stickers; \$25 per examiners manual, \$75 per stimulus book, \$50 per 25 record forms and response booklets.</p>	<ul style="list-style-type: none"> Designed for PreK through grade 3 students, this individually administered diagnostic instrument can help you quickly screen children at risk for mathematics difficulties, target areas of needed instruction, and monitor skill attainment and intervention efforts. Content derived from the Wechsler Individual Achievement Test, 2nd Ed. (WIAT-II). 	<ul style="list-style-type: none"> Individual administration Can be administered by teachers and other school professionals 20-30 minutes for administration Basals and ceilings (6 wrong) are used to determine where a student starts and stops in the assessment. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input checked="" type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> Raw scores are calculated and a total raw score is obtained. This total raw score can be converted in a percentile range, that yields a “category of achievement” and a standard score (M = 100, SD = 15). Three categories for PreK-K: Emerging, Basic, and Proficient, three categories for 2-3: Below Basic, Basic, and Proficient. Two subtests: Math Reasoning and Numerical Operations. Scored by: teachers, school psychologist, other school professional Co-normed with WIAT-II, 1,374 children 5-8 years old 	<p><i>Some evidence of technical adequacy (Buros review)</i></p> <p>Internal consistency: Split-Half Reliability ranged from .71 to .93 (standardization sample).</p> <p>Parallel/alternate forms and inter-rater reliability not conducted.</p> <p>Test-retest reliability: From .96 for Math Reasoning to .92 for Numerical Operations, using a testing interval of 7.45 days (M = 10 days). No data for PreK students.</p> <p>Content validity: Extensive planning and research went into identifying items/content.</p> <p>Criterion validity: Correlated with the WIAT math scales .78-.82; WRAT-3 arithmetic scale .67-.77; DAS Basic Number Skills scale=.75; teacher-assigned mathematics grades were correlated at .35, and at .51 with the Math Reasoning scores.</p> <p>No discriminant, predictive or internal validity information. Buros review cautions that evidence to support some subscore constructs is incomplete.</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Group Mathematics Assessment and Diagnostic Evaluation (G•MADE)</u></p> <p>Publisher: AGS Globe (Pearson)</p> <ul style="list-style-type: none"> • Representative: Cindy Sheldon • Phone: (800) 328-2560 ext 7706 • http://www.agsnet.com <p><u>Purpose:</u> Diagnostic</p> <p><u>Grade Levels:</u> K-12</p> <p><u>Cost:</u> As of 2007: \$110.99-\$184.99 per Form A classroom sets (specify level) including teacher’s manual, hand-scoring templates, answer sheets, and 30 student booklets; \$201.99-303.99 per Forms A&B classroom sets; \$31.99 per norms supplement; \$34.99 per technical manual; \$349.0 per Scoring and Reporting Software v. 2.1 PC and Mac version; \$2,295.99 per Scoring and Reporting Software Single PC Scanning version 2.1; \$114.99 per Resource Library. Specify level for all.</p>	<ul style="list-style-type: none"> • G-MADE is a norm-referenced group diagnostic mathematics test that measures individual skills in the main areas of math as identified by the National Council of Teachers of Mathematics (NCTM) including Concepts and Communication, Operations and Computation, and Process and Application. Use this in-depth test to help you pinpoint areas where students need instruction. Scores include stanines, percentiles, grade equivalents, age equivalents, standard scores, normal curve equivalents, and growth scale values. • G-MADE is flexible enough to be administered in 50-90 minutes, as one session or as shorter, multiple sessions. Fall and spring norms, plus parallel forms for each level make G-MADE ideal for tracking student progress throughout the school year. G-MADE is appropriate for mathematics assessment, placement, and growth assessment. • G-MADE offers a complete correlated instructional cycle so you can plan classroom activities that directly address test results. 	<ul style="list-style-type: none"> • 60-90 minutes per level, group administration • Paper/pencil 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input checked="" type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> • If the scoring and reporting software is used, including standard scores, percentiles, grade equivalents, normal curve equivalents, stanines, etc. • Subtests include Concepts and Communication, Operations and Computation, and Process and Application. • National standardization sample of 26,099 students from K-12 	<p><i>Substantial evidence of technical adequacy</i></p> <p>Internal consistency: Median for Form A = .93 and Form B = .94 (range .91-.98).</p> <p>Parallel/alternate forms reliability: .84 to .96</p> <p>Test-retest reliability: At one month: .78 to .91 for K-4, and .90 for 5-12.</p> <p>Content validity: yearlong study of state standards, curriculum benchmarks, the scope & sequence plans of commonly used math textbooks, and a review of the best practices for the teaching and learning of math concepts and skills</p> <p>Criterion validity: GMADE was correlated with the ITBS, the TerraNova, the Iowa Tests of Educational Development, and one standardized state test, correlations from .74 - .90, median $r = .84$</p> <p>Predictive validity: GMADE predicted performance on ITBS at high levels.</p> <p><i>(Recommended by Buros review)</i></p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>KeyMath Revised/Normative Update (NU): A Diagnostic Inventory of Essential Mathematics</p> <p>Publisher: AGS (Pearson)</p> <ul style="list-style-type: none"> Phone: (800) 328-2560 http://www.agsnet.com <p>Purpose: Screening, summative</p> <p>Grade Levels: K-12</p> <p>Cost: \$334.00 - \$638.00</p>	<ul style="list-style-type: none"> Achievement test. KeyMath-Revised-Normative Update (KeyMath-R/NU) provides an accurate measurement of students' math skills with up-to-date norms and hundreds of test items. Because the test does not require reading ability, it is easy to administer to a wide range of students. Educational professionals from classroom aides to school psychologists can administer KeyMath-R effectively. Thorough coverage of math concepts, operations, and applications. Two parallel forms let you test and retest with confidence. ASSIST software offers easy scoring and provides reporting, and remediation strategies. 	<ul style="list-style-type: none"> Individual administration Administrator uses an easel to present questions to the student, gives vocal directions, and records the student's response on a scoring sheet. Basal and ceiling testing methods used, therefore, students do not respond to all test items and all test items easier than the starting item are assumed correct while all items more difficult than the top three missed items are considered wrong – possibly inflating reliability estimates. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input checked="" type="checkbox"/> Geometric sense <input checked="" type="checkbox"/> Measurement <input type="checkbox"/> Probability <input checked="" type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> 3 Area Composites and Total Test-Standard scores (M = 100 SD = 15) grade and age equivalents, percentile ranks, stanines, and NCEs; Subtests-Scaled scores (M = 10, SD = 3) percentile ranks, stanines, and NCEs. Scored by hand, or entered into the test software. Computer software provides scales scores, percentile ranks, GE scores and others. 	<p><i>Some evidence of technical adequacy</i></p> <p>Internal consistency: Total test Adjusted split-half reliabilities.90-.99; three primary areas of content .65-.97; individual strands.70- 94</p> <p>Parallel/alternate forms reliability: Total .88-.92; three primary areas of content.79-.85; individual strands.53-.80</p> <p>No inter-rater or test-retest reliability reported.</p> <p>Content validity: KeyMath-R was developed in a thoughtful manner, with the assistance of many individuals with a substantial background in mathematics education</p> <p>Construct validity: Total test correlations with the earlier version of KeyMath range from .86 to .93, with CTBS and ITBS they were .66 and .76 respectively.</p> <p>No Discriminant, predictive, or internal validity information.</p> <p><i>(Buros Review)</i></p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Math Access!</p> <ul style="list-style-type: none"> • Publisher: Vantage Learning • Representative: • Phone: (800) 230-2213 • Website: http://www.vantagelearning.com <p>Purpose: Diagnostic</p> <p>Grade Levels: K-12</p> <p>Cost:</p>	<p>Vantage Learning's newest product provides for comprehensive diagnostic feedback in mathematics. Math Access! employs our powerful VANCATM 3-parameter IRT computer adaptive testing (C.A.T.) engine to provide the most accurate diagnostic evaluation available. Students receive detailed reports highlighting areas of proficiency and areas that need improvement</p> <p>Math Access!™ is a Complete Suite of Mathematics Diagnostic and Instructional Assessment Tools for Students in Grades K-12.</p> <p>Math Access!™ is a series of interactive diagnostic math assessments that delivers immediate information about student progress and individual skill levels formatively throughout the year.</p> <p>Comprehensive Item Bank - Over 4,000 standards-aligned multiple-choice and open-ended math items.</p>	<p>Online or Paper-pencil Test Delivery - Provides flexibility and addresses issues related to the “digital divide.” Tests can be printed out and results scanned and uploaded into the system for timely data</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>The diagnostic assessments are automatically scored and analyzed to help teachers focus instruction on student needs. By using Math Access™ to regularly assess students’ skills and progress, educators gain fast and accurate information about student proficiency levels in grades K-12 (including Algebra).</p> <p>Math Access™ allows teachers to map out a blueprint for instruction by accurately assessing student strengths and weaknesses relative to state standards. From pre-test to post-test and formative assessment in-between, Math Access™ can help improve student math skills.</p>	<p><i>No evidence of technical adequacy is available at this time</i></p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Math Achievement Predictors</u></p> <ul style="list-style-type: none"> • Publisher: Options Publishing • Representative: • Phone: (800) 782-7300 • Website: http://www.optionspublishing.com <p><u>Purpose:</u> Screening, diagnostic</p> <p><u>Grade Levels:</u> 1-8</p> <p><u>Cost:</u> Teacher guide \$6.95, student books \$6.95 (1-10 copies) \$3.25 (11+ copies)</p>	<p>A math pre-test helps you identify strengths and needs, and place students in appropriate materials at a comfortable level of instruction, not frustration. Post-test results show growth and help you determine when more difficult materials are appropriate.</p> <p>Place students into appropriate levels for instruction</p> <p>Identify every student's specific areas of strengths and weaknesses in math</p> <p>Show student progress and growth in math skills</p>		<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>Unknown</p>	<p><i>No evidence of technical adequacy is available at this time.</i></p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Math Level Indicator: Quick Group Math Placement Test</u></p> <ul style="list-style-type: none"> • Publisher: Pearson Education • Representative: • Phone: (800) 321-3106 • Website: http://www.pearsonschool.com/index.cfm?locator=PSZ3Rg&pageitemid=1&PMDbProgramId=31641&PMDbSiteId=2781&PMDbSolutionId=6726&PMDbSubSolutionId=21683&PMDbCategoryId=&level=4&CFID=1704783&CFTOKEN=48587521 <p><u>Purpose:</u> Screening</p> <p><u>Grade Levels:</u> 4-12</p> <p><u>Cost:</u> Cost: Starter set: \$153.50; 25 forms: \$37.95; manual: \$27.95; 2 hand-scoring templates: \$44.95; 25 scannable answer sheets: \$20.50.</p>	<p>The Math-Level Indicator allows you to determine the math ability of your whole class in approximately 30 minutes!</p> <p>The problems contained in the Math Level Indicator are based on NCTM Standards-specifically, the five content standards and the process standards of Problem Solving, Reasoning and Proof, and Communication.</p> <p>The test covers: Four basic operations (addition, subtraction, multiplication, and division); Whole numbers, fractions, decimals, and percents; Numeric and word problems</p> <p>MLI items a subset of G*MADE item pool</p>	<p>Untimed (20 to 30 minutes for most individuals)</p> <p>Can be either group or individually administered</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input checked="" type="checkbox"/> Number sense <input checked="" type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input checked="" type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input checked="" type="checkbox"/> Reasoning 	<p>Handscore or computer score</p> <p>Percentile ranks and w-ability scores (optional)</p> <p>Test may not fully represent NCTM standards (Buros), 44 of 60 items represent Numbers and Operations</p>	<p><i>Some evidence of technical adequacy</i></p> <p>Parallel or alternate forms reliability: .84-.90, median = .89</p> <p>No Test-retest reliability information</p> <p>Coefficient alpha: .82-.98, median = .87</p> <p>Split half: .83-.90, median = .88</p> <p>Content validity evidence: “by examination of list of skills measured by each item and cluster.”</p> <p>No data offered to show link to G*MADE</p> <p>More study needed; test should not be used for high-stakes purposes or as a comprehensive assessment (Buros).</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>mCLASS@:Math</p> <ul style="list-style-type: none"> • Publisher: Wireless Generation • Representative: • Phone: (800) 823-1969 • Website: http://www.wirelessgeneration.com/products.php?prod=mClass:Math <p>Purpose: Screening, formative, diagnostic</p> <p>Grade Levels: K-3</p> <p>Cost:</p>	<ul style="list-style-type: none"> • mCLASS@:Math provides users with tools for proficiency screening, diagnostic interviewing, progress monitoring, data collection and aggregation, and robust reporting for a balanced, research-based approach to formative assessment and actionable instructional guidance. • The mCLASS@:Math solution identifies: What students know, how they know it, what to do about it. mCLASS:Math was developed in collaboration with Dr. Herbert Ginsburg, Professor of Psychology and Education at Columbia University's Teachers College, and leading researcher on development of mathematical thinking and assessment of cognitive function. • Uses two research-based assessment methods: Curriculum-Based Measures (CBM) and Diagnostic Interviews. Together they provide an in-depth picture of students' mathematical thinking to help teachers understand not only what their students know, but how they know it. 	<p>Students complete worksheets in a group setting.</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>mCLASS:Math screening and Progress Monitoring for grades K-1: supports the recommended method of one-on-one Screening and Progress Monitoring. Teachers are equipped with handheld software to conduct the assessments in a fast, reliable and efficient manner.</p> <p>mCLASS:Math screening and Progress Monitoring for grades 2-3: supports group administration to an entire classroom which does not employ handheld software. Students complete worksheets in a group setting, and summary results are entered directly to www.mclasshome.com using Web-entry software to view reports data.</p> <p>mCLASS:Math Diagnostic Interviews for grades K-3: all Diagnostic Interviews are individually-administered by teachers using handheld-to-web software.</p>	<p><i>No evidence of technical adequacy at this time</i></p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Measures of Academic Progress</p> <ul style="list-style-type: none"> • Publisher: Northwest Evaluation Association • Representative: • Phone: (503) 624-1951 • Website: http://www.nwea.org/assessments/map.asp <p>Purpose: Formative, diagnostic</p> <p>Grade Levels: 2-10 (Tests are grade independent so they may be appropriate for students in lower or higher grades.)</p> <p>Cost:</p>	<p>MAP tests: Are aligned to each state's measurement scales and content standards, and are often used as an indicator of preparedness for state assessments. Allow educators to test up to four times a year providing the opportunity to make timely instructional adjustments. Are grade independent allowing educators to monitor a student's academic growth. Dynamically adjust to each student's performance level, providing accurate indication of his or her instructional level.</p>	<p>Computerized</p> <p>Tests are adaptive and un-timed</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>Report scores as norm-referenced, achievement, and growth, providing different perspectives on an individual student's learning.</p> <p>Available scores: Percentile scores, Achievement scores, Growth scores</p>	<p>Substantial evidence of technical adequacy</p> <p>Internal consistency reliability: .92-.95 across grade levels</p> <p>Inter-rater reliability: yes, but values not reported</p> <p>Test-retest reliability: .70-.94</p> <p>Concurrent validity: .70-.90 with a large number of other instruments including ITBS, Stanford, and state tests</p> <p>Concurrent validity with WASL .80 at grade 4, .85 at grade 7 in 1998 and .81 at grade 10 in 1999.</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Mental Mathematics 6-14</u></p> <ul style="list-style-type: none"> • Publisher: GL Assessment • Representative: • Phone: • Website: <p>http://shop.nfer-nelson.co.uk/icat/7450134main</p> <p><u>Purpose:</u> Diagnostic, summative</p> <p><u>Grade Levels:</u> Ages 6-14</p> <p><u>Cost:</u></p>	<p>Note: this is a British test and it maps on to British school systems and standards.</p> <p>A series of nine standardized tests, delivered by audiocassette, to assess children's mental agility in math year-on-year. Provides age-standardized scores for comparing pupils' performance accurately with others in the same age group. Progress scores enable you to compare an individual's current performance with their own previous test scores year-on-year.</p>	<p>Group or individual administration</p> <p>Administration time = 20 minutes</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>Provides age-standardized scores for comparing pupils' performance accurately with others in the same age group.</p> <p>Stratified standardization sample from UK with over 1,000 students at each grade level.</p>	<p><i>No evidence of technical adequacy at this time</i></p> <p>Kuder-Richardson 20 formula: .83(SEM = 6.2) through .89 (SEM = 5.1). (Buros)</p> <p>No validity evidence. (Buros)</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>PASeries</u></p> <ul style="list-style-type: none"> • Publisher: Pearson Education • Representative: • Phone: (888) 788-1817 • Website: http://www.paseries.com/ <p><u>Purpose:</u> Screening, diagnostic</p> <p><u>Grade Levels:</u> 3-8</p> <p><u>Cost:</u> NA</p>	<p>Pearson PASeries® Mathematics for grades 3-8 is the first formative assessment product designed to measure progress and forecast student growth toward state performance goals or grade level expectations. PASeries (Progress Assessment Series®) connects classroom instruction to results, helping states and districts meet increasing demands for accountability.</p> <p>For grades 3-8. Math: Screening test for placement; Six progress-monitoring tests for each grade to measure growth and forecast performance on statewide tests or toward grade level expectations; Diagnostic tests by strand for targeting instruction.</p> <p>Pearson PASeries® Algebra I for grades 6-12</p>	<p>Online or paper delivery during a single class period.</p> <p>PASeries Mathematics:</p> <p> Screener tests used to determine student initial level of ability for diagnostic purposes.</p> <p>Six tests per grade designed to be administered approximately every six weeks for progress monitoring.</p> <p>PASeries Algebra I:</p> <ul style="list-style-type: none"> • Six progress-monitoring tests measure growth over time and forecast performance • Five diagnostic tests - one in each content strand per grade - guide instructional support decisions by identifying student's strengths, weaknesses, and common errors within each of the five content strands 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>Online reporting and a host of report options including growth forecasting and prediction of state test performance.</p> <p>Reports available on web immediately or for more complex reports in 24 hours.</p> <p>Test items field tested on over 26,000 students from 20 states across the US over the 2003-2004 school year.</p> <p>General reports (no numeric values) for reliability; stated use of Rasch one-parameter IRT.</p>	<p><i>Limited evidence of technical adequacy is available at this time</i></p> <p>Content validity evidence aligned with multiple states' standards as well as the NCTM and NAEP content standards.</p> <p>PASeries math correlated with NWEA MAP at .69 grades 4 & 5 (N=94).</p> <p>Bias and sensitivity reviews conducted</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Stanford Diagnostic Mathematics Test, Fourth Edition</u></p> <ul style="list-style-type: none"> • Publisher: Harcourt Assessment, Inc. • Representative: • Phone: (800) 211-8378 • Website: http://harcourtassessment.com/haiweb/cultures/en-us/productdetail.htm?pid=015-4891-10X <p><u>Purpose:</u> Diagnostic</p> <p><u>Grade Levels:</u> 1.5-13</p> <p><u>Cost:</u> \$50.00 for each examination kit, additional charges for test booklets, answer sheets, etc.</p>	<p>The Stanford Diagnostic Mathematics Test, Fourth Edition (SDMT 4), measures competence in the basic concepts and skills that are prerequisite to success in mathematics, while emphasizing problem-solving and problem-solving strategies. SDMT 4 identifies specific areas of difficulty for each student so that teachers can plan appropriate intervention.</p> <p>SDMT 4 provides both multiple-choice and optional free response assessment formats. Students select and apply problem-solving strategies and use their reasoning and communication skills.</p> <p>SDMT 4 subtests have been statistically equated to the ninth edition of the Stanford Achievement Test Series, as well as to the third edition of SDMT, to allow school districts to maintain accurate longitudinal data for each student.</p> <p>The free-response component enables teachers to obtain more information regarding students' strengths and needs by observing the problem-solving process used in arriving at the result.</p> <p>Practice tests are available for grades 1 through 8 to help students become familiar with the types of questions.</p> <ul style="list-style-type: none"> • Evaluate students for program placement • Determine mathematics strengths and weaknesses for instructional planning • Provide special help for students who lack essential mathematics skills • Identify trends in mathematics achievement • Provide information about the effectiveness of instructional programs • Measure changes occurring over a specific instructional period 	<p>Group administration</p> <p>Best used to diagnose progress at group level (Buros)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input checked="" type="checkbox"/> Problem-solving <input checked="" type="checkbox"/> Reasoning 	<p>SDMT 4 may be hand-scored locally by the classroom teacher or centrally scored by Harcourt Assessment Scoring & Reporting Services.</p> <p>National tryout included about 27,000 students from 32 states.</p>	<p><i>Some evidence of technical adequacy</i></p> <p>Parallel or alternate forms reliability (L): Generally .70 and above for subtests except for some in the .50 range and as low as .29.</p> <p>Inter-rater reliability yes (L)</p> <p>KR 20 and KR21 reliability estimates reported.</p> <p>High correlations among subtests noted.</p> <p>Content validity evidence: based on NCTM standards</p> <p>Construct validity: inter-correlations among SDMT4 and Otis-Lennon School Ability Test (6th Ed). High correlations, but this test is a general ability test, so shouldn't be related to a predictive test (L).</p> <p>Criterion validity evidence: correlations between SDMT 3 and 4; noted that no evidence of SDMT 3 utility provided, therefore criterion validity questionable (L).</p> <p>DIF analyses conducted.</p> <p>“diagnostic value may be limited” (Buros)</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>STAR Math Accelerated Math</u></p> <ul style="list-style-type: none"> • Publisher: Renaissance Learning, Inc. • Representative: • Phone: (800) 656-6740 • Website: http://www.renlearn.com/sm/ <p><u>Purpose:</u> Diagnostic, placement</p> <p><u>Grade Levels:</u> K-12</p> <p><u>Cost:</u></p> <p>One-Time School Fee: New STAR Math customers: \$1,499; Upgrade from 1.x school license: \$698; Upgrade from 2.x school license: \$99</p> <p>Plus an Annual Student Fee: \$100 per year for up to 205 students and 49¢ per student per year for additional students.</p> <p>Other packages available.</p>	<p>Assess students’ math levels in less than 15 minutes. Receive accurate, reliable, norm-referenced math scores including grade equivalents, percentile ranks, and normal curve equivalents. Determine the appropriate level of challenge for each student to personalize practice and individualize instruction. Predict results on state and national standardized tests including ITBS, CAT, and TerraNova. Save money by administering assessments throughout the school year at no extra cost. Track growth in student math achievement longitudinally, facilitating the kind of growth analysis recommended by state and federal organizations.</p>	<p>Individual, computerized</p> <p>Administration time = 15 minutes</p> <p>Assessments can be administered throughout the school year.</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>Produces norm-referenced math scores including grade equivalents, percentile ranks, and normal curve equivalents. Total score only.</p> <p>Determine the appropriate level of challenge for each student to personalize practice and individualize instruction.</p> <p>Predict results on state and national standardized tests including ITBS, CAT, and TerraNova.</p> <p>Track growth in student math achievement longitudinally, facilitating the kind of growth analysis recommended by state and federal organizations.</p> <p>One Buros reviewer questions the adequacy and usability of the computer interface</p>	<p><i>Some evidence of technical adequacy</i></p> <p>2471 items pilot tested on national sample of almost 45,000 students in grades 1-12; 45 states, 261 schools. Normed in 2002 on almost 30,000 students from 312 schools in 48 states; stratified according to geographic region, per-grade district enrollment, and SES.</p> <p>Parallel or alternate forms reliability :.72-.80</p> <p>Split half: .78-.88</p> <p>Aggregate reliabilities across grade level: above .90</p> <p>Generic reliability reported: .79-.88</p> <p>Construct validity: correlations with other standardized tests (.58-.70) and teacher ratings (.38-.58)</p> <p>“only superficial evaluation of student skills”, not well aligned to NCTM standards, not recommended by one reviewer; another reviewer more positive (Buros)</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Test of Early Mathematics Ability</u></p> <ul style="list-style-type: none"> • Publisher: PRO-ED, Inc. • Representative: • Phone: (800) 897-3202 • Website: http://www.proedinc.com <p><u>Purpose:</u> Diagnostic, norm referenced</p> <p><u>Grade Levels:</u> Age: 3.0 – 8.11</p> <p><u>Cost:</u> \$278</p>	<p>The TEMA-3 measures the mathematics performance of children between the ages of 3-0 and 8-11 and is also useful with older children who have learning problems in mathematics. It can be used as a norm-referenced measure or as a diagnostic instrument to determine specific strengths and weaknesses. Thus, the test can be used to evaluate programs, screen for readiness, discover the bases for poor school performance in mathematics, identify gifted students, and guide instruction and remediation. The test measures informal and formal (school-taught) concepts and skills in the following domains: numbering skills, number-comparison facility, numeral literacy, mastery of number facts, calculation skills, and understanding of concepts. It has two parallel forms, each containing 72 items.</p>	<p>Individual administration using basal and ceiling administration rules.</p> <p>Takes 45-60 minutes to administer.</p> <p>Two forms.</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>Test results are reported as standard scores, percentile ranks, and age and grade equivalents.</p> <p>Normative sample was 637 children for Form A and 591 for Form B in 2000 and 2001. Data collected primarily from four states (New York, South Dakota, Texas, and Oregon)</p>	<p><i>Substantial evidence of technical adequacy</i></p> <p>Internal consistency reliabilities are all above .92, median=.95;</p> <p>Immediate and delayed alternative form reliabilities are in the .80s and .90s.</p> <p>Validity coefficients with KeyMath, Woodcock-Johnson, Diagnostic Achievement Battery, and Young Children’s Achievement Test; median correlation was .65</p> <p>Sensitivity and DIF review conducted.</p> <p>Generally positive Buros reviews</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p><u>Test of Mathematical Abilities</u></p> <ul style="list-style-type: none"> • Publisher: PRO-ED, Inc. • Representative: • Phone: (800) 897-3202 • Website: http://www.proedinc.com <p><u>Purpose:</u> Diagnostic; norm referenced interpretation</p> <p><u>Grade Levels:</u> 3-12</p> <p><u>Cost:</u> \$95</p>	<p>Provides norm-referenced test results, analyze students' strengths and needs using five detailed subtests.</p> <p>Five norm-referenced subtests, the TOMA-2 provides a resource to help you measure progress, evaluate programs, and conduct research. The test measures math performance for the two major skill areas: story problems and computation. The TOMA-2 also examines attitude, vocabulary, and general application of mathematics concepts in real life. The test offers a core battery of subtests that assess: Vocabulary, Computation, General Information, Story Problems. A supplemental subtest gives additional information on Attitudes Toward Math.</p>	<p>Administration Time: 60-90 minutes.</p> <p>Basal and ceiling rules for administration.</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<p>The results of the test may be reported in standard scores, percentiles, and grade or age equivalents. The standard scores of the core battery are combined to comprise a total score called the Math Quotient.</p> <p>The TOMA-2 uses a standardization sample comprised of 2,147 students representing 26 states. The characteristics of the sample are similar to those reported in the 1990 Statistical Abstract of the United States for the population as a whole. Normative information is given for students ages 8-0 through 18-11.</p>	<p><i>Some evidence of technical adequacy</i></p> <p>Reliability coefficients for the subtests are above .80, and those for the Math Quotient exceed .90.</p> <p>Content validity evidence item analysis using correlations performed on the normative sample; range from .34 to .70</p> <p>Criterion validity evidence: KeyMath Diagnostic Arithmetic Test, Peabody Individual Achievement Test, and Wide Range Achievement Test; range: .27-.56; .38 to .72 for SRA Achievement Series.</p> <p>Construct Validity: correlation of core subtests with age (.36-.61)</p> <p>DIF studies conducted.</p> <p>Not recommended by Buros reviewers; more favorable review by Griffin (1997)</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Woodcock-Johnson III Tests of Achievement (WJ III ACH)</p> <p>Publisher: Riverside Publishing (2001)</p> <ul style="list-style-type: none"> Phone: 800-323-9540 Website: www.riverpub.com <p>Purpose: Summative (Achievement test); diagnostic applications</p> <p>Grade Levels: K-12</p> <p>Cost: \$ 466.50 for Form A , Cost: \$ 466.50 for Form B ; two equivalent forms available</p> <p>NRT</p>	<ul style="list-style-type: none"> Content: Reading, Oral Language, Mathematics, Written Language, Academic Knowledge WJ III Achievement test is a broad, standardized test battery of academic achievement. It contains the following subscales: <ul style="list-style-type: none"> Reading measures: Phonemic Awareness – segmentation; Letter Names; Word Attack nonsense words; Word Identification – regular and irregular; Reading Fluency – sentences; Listening Comprehension; Reading Comprehension – silent, retell, cloze; Vocabulary – oral and reading; Other: Oral Language, Written Language; Supplemental: Delayed Story Recall, Handwriting Legibility, Spelling of Sounds, Sound Awareness, Punctuation/Capitalization Measures student performance in English and Spanish. Not designed to inform instruction, or support progress monitoring. 	<ul style="list-style-type: none"> Individually administered standardized achievement battery. Easel stimulus booklet is placed between student and examiner so that student responds to stimuli, words, pictures, etc. while examiner records responses in response booklet. Timing occurs in some subtests. Basal and ceiling rules apply in some subtests. Many subtests, but few items per subtest. Long used in public school districts for evaluation for helping to determine learning disabilities and needs for support , and summative evaluation. <i>Explicit instructions for examiner qualifications, examiner expertise/training to adhere to standardized administration.</i> Time to Administer: varies ~5 minutes per subtest 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input type="checkbox"/> Algebraic sense <input type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning 	<ul style="list-style-type: none"> Produces raw score, standard score, %ile score, grade equivalents, IRT-based score, normal curve equivalents, developmental benchmarks, subtest scores, composite score, and age and grade norms High degree of training and skill with administering standardized assessments required. May be hand-scored or computer scored with Compuscore software which produces standard reports (summary narratives) about student performance (English or Spanish versions). Compuscore software program more accurate, efficient scoring, and generates summary reports which may be shared with consumers. Can modify size of confidence intervals, and discrepancy cut scores can be modified. Separate sets of norm tables for ages, grades, subgroups, students with disabilities. Caution: Developers suggests using <u>discrepancy model (among achievement/cognitive skills)</u>. Discrepancy model has little validity evidence. May combine tests into <u>cluster scores</u> for Reading or Mathematics. 	<p><i>Substantial evidence of technical adequacy (Buros).</i></p> <p>Norm sample, though large and probably representative, is now about 10 years old. May affect relevance of results. Found 140 references to WJ. Normed from 1996 – 1999 on 8,818 individuals. Items reviewed for sensitivity and cultural bias, factor analysis suggests same constructs measured across groups.</p> <p>Internal consistency: <.80 for 38 tests, and above .90 for 11. Most above .70. Cluster reliabilities mostly above .90.</p> <p>Test-retest : .69 - .96</p> <p>Content validity: Item banks analysis of differential item function, Rasch scaling, moderate to strong correlations with other commonly used achievement batteries.</p> <p>Criterion validity: Scores on WIAT and K-TEA correlations in the range .50 to .80.</p> <p>Discriminant validity evidence: Scores from known groups (children ID'd as gifted, etc.) perform in expected patterns.</p>

WASHINGTON STATE MATHEMATICS ASSESSMENT INFORMATION MATRIX

ASSESSMENT	DESCRIPTIVE INFORMATION	ADMINISTRATION	CONTENT	SCORING AND REPORTING	TECHNICAL ADEQUACY
<p>Yearly Progress Pro</p> <ul style="list-style-type: none"> • Publisher: CTB/McGraw-Hill • Representative: • Phone: (800) 538-9547 • Website: http://www.ctb.com/mktg/ypp/ypp_highlights.jsp <p>Purpose: Formative</p> <p>Grade Levels: 1-8</p> <p>Sample Reports: Easy-to-read reports generated by skill, student, class, district, and student demographics</p> <p>Language: English only (limited Spanish)</p> <p>Cost: Per Student \$9.25 first component Math or RLA; \$14.25</p>	<ul style="list-style-type: none"> • The Yearly ProgressPro system provides educators with a number of critical tools to assist them in the classroom, all linked to an easy to understand data management system that allows them to track and see trends in students' academic performance in real time. • Yearly ProgressPro provides a comprehensive set of pre-built curriculum-based assessments that can be delivered weekly. These assessments provide detailed diagnostic information on students' academic progress on a defined set of skills. • Yearly ProgressPro provides a dynamic and simple to use assessment creator, which gives educators the ability to quickly and easily create customized assessments from our vast bank of problems. An instructional exercise has been created for each of the skills we assess. • Our most important feature is the data management system, which allows educators to trend and track student performance in real time. The system measures individual students' skill strengths and weaknesses and can track whole class performance on specific skills or skill groupings. 	<ul style="list-style-type: none"> • YPP offers online pre-built 15-minute Curriculum-Based Measurement assessments and/or online teacher-created Classroom Assessments • Qualification: Administrators and teachers administer YPP to assess student mastery, prescribe instruction and analyze results. • Admin: Individual or group • Time: 15 minutes • YPP enhances teacher efforts through the use of data on specific skills, allows educators and administrators to make decisions on skill-specific data and boosts student learning through identification of unique individual needs and use of YPP instructional exercises. 	<ul style="list-style-type: none"> <input type="checkbox"/> Content Coverage not determined <input type="checkbox"/> Number sense <input checked="" type="checkbox"/> Algebraic sense <input checked="" type="checkbox"/> Geometric sense <input type="checkbox"/> Measurement <input type="checkbox"/> Probability <input type="checkbox"/> Statistics and data <input type="checkbox"/> Functions <input type="checkbox"/> Representations <input type="checkbox"/> Problem-solving <input type="checkbox"/> Reasoning <p>Publisher asserts all content areas are aligned to Washington standards.</p>	<ul style="list-style-type: none"> • YPP automatically scores and records all CBM and custom tests. Reports track progress over time. Real-time reports are available at student, class, school and district levels. 	<p><i>Some evidence of technical adequacy</i></p> <p>In an unpublished study (Stecher, 2005), internal consistency reliabilities on a national sample are reported from a low of .58 at grade 8 to .90 at grade 2 across the multiple forms of the test. Median reliabilities ranged from .73 to .86 by grade with lower reliability at the higher grades.</p> <p>Validity evidence (Stecher, 2005): On sample of from 80 to 102 students:</p> <p>Correlations between YPP and the ITBS ranged from .60 to .88 by grade.</p> <p>Correlations between YPP and the Stanford 10 ranged from .43 to .88 by grade.</p> <p>Correlations between YPP and the CTBS/TerraNova ranged from .36 to .75 by grade.</p> <p>Generally coefficients were lower for the higher grades.</p>